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ABSTRACT

An annual annotated listing of research on mathematics education is presented. The research is organized alphabetically by author(s) within three categories (research summaries, journal-published reports, and dissertation abstracts). Grade and age levels are indicated for each reference. An index of general topics is appended to help readers locate studies of particular interest. Included in the listing are studies in which mathematics education was not the sole or primary focus of the research. While most of these peripheral studies are not annotated, those studies specific to mathematics are annotated, and most annotations indicate one principal finding of the study. (MP)

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The *Journal for Research in Mathematics Education* is devoted to the interests of teachers of mathematics and mathematics education at all levels—elementary school through college.

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RESEARCH ON MATHEMATICS EDUCATION REPORTED IN 1979

Marilyn N. Suydam
The Ohio State University

J. F. Weaver
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This tenth annual listing of research on mathematics education published in *JRME* uses the same format as was used last year. The research is organized alphabetically by author(s) within three categories (research summaries, journal-published reports, and dissertation abstracts), with grade or age indicated for each reference. An index of general topics is appended to help readers locate studies of particular interest. Journals searched are also listed.

Included in the listing are studies in which mathematics education was not the sole or primary focus of the research. Most of these peripheral studies are not annotated, but studies specific to mathematics education are annotated, as in previous years.

Most annotations indicate one principal finding of the study, although there may be other findings of interest to individual readers. As usual, we caution that there is no substitute for careful reading of the complete research report. Readers are urged to check the original report for other results of a study as well as for information that will aid them in assessing the validity of the findings.

Despite the fact that we search journals page by page and use indexes (such as *Current Index to Journals in Education*) to locate articles in journals in which mathematics research reports appear irregularly or in journals to which we have no access, we fail to locate some references until after the listing for a given year is in print. Thus, some additional reports (often "peripheral" by our earlier definition) are listed in *Psychological Abstracts*, which cites references a year or more after they have been published. We

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The bibliographical entries in this listing do not conform to *JRME* style requirements. Permission was granted to the authors to follow the procedures and format previously established.—*The Editor*

DAI is used to refer to *Dissertation Abstracts International*. Order numbers are included; orders should be sent to University Microfilms International, P.O. Box 1764, Ann Arbor, MI 48106.

Funds for the preparation of this publication were provided in part by the ERIC Clearinghouse for Science, Mathematics, and Environmental Education pursuant to a contract with the National Institute of Education (NIE). Contractors undertaking such projects under government sponsorship are encouraged to express freely their judgment in professional and technical matters. Points of view or opinions do not, therefore, necessarily represent official NIE position or policy.

apologize for such omissions. Because of time and space constraints, no attempt has been made to provide a continuous updating within the annual listing. At intervals, however, the ERIC Clearinghouse for Science, Mathematics, and Environmental Education publishes a compilation of research references* containing those listed in *JRME* plus additional references (including ERIC documents).

We try to produce a listing that will aid readers; it is printed as soon as possible after the year to which it applies. We hope we succeed in helping to keep a variety of readers informed about the scope of research in mathematics education.

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* Recently published was: Suydam, Marilyn N. *A Categorized Listing of Research on Mathematics Education, 1974–1978.* Columbus: ERIC/SMEAC, 1979.

Editor for *JRME* 1982–1985

Nominations for editor of *JRME* are being solicited. The *JRME* editor is appointed for a three-year term by the NCTM Board of Directors on recommendation of the Publications Committee, with due consideration to suggestions solicited from the *JRME* Editorial Board. This person will serve as editor designate for 1981–82 before assuming total editorial responsibilities for the 1982–85 term. These responsibilities include publication decisions and fiscal and editorial management of the journal. Any person suggested should be an outstanding scholar in mathematics education, with demonstrated editorial, managerial, and leadership skills. Institutional support, such as released time from other duties, is essential.

Names of qualified persons should be submitted to Dr. Mary M. Lindquist, Chair, *JRME* Editorial Board, National College of Education, Evanston, IL 60201, by 1 September 1980.

NSF RISE Program

Anyone who would like a copy of the *Guide for Preparation of Preliminary Proposals* for the Research in Science Education program of the National Science Foundation should write to: Research in Science Education, Science Education Development and Research, National Science Foundation, Washington, DC 20550. Persons hoping to start a project during the 1981–82 academic year should submit a preliminary proposal as soon as possible. Telephone calls may be placed to the RISE staff at (202) 282-7745.

Research Summaries

One listing of research reports and 11 articles summarizing or discussing research findings were located.

Austin, J. L. and Howson, A. G. Language and Mathematical Education. Educational Studies in Mathematics 10: 161-197; May 1979.

Research and other writing on the language factors affecting the learner, the language of the teacher, and the language of mathematics are discussed, with an annotated bibliography.

Austin, Joe Dan. Home Work Research in Mathematics. School Science and Mathematics 79: 115-121; February 1979.

Studies from 1900-1977 were reviewed; conclusions pre- and post-1950 were drawn.

Fennema, Elizabeth. Women and Girls in Mathematics--Equity in Mathematics Education. Educational Studies in Mathematics 10: 389-401; November 1979.

Fey, James T. Mathematics Teaching Today: Perspectives from Three National Surveys. Arithmetic Teacher 27: 10-14; October 1979.

Fey, James T. Mathematics Teaching Today: Perspectives from Three National Surveys. Mathematics Teacher 72: 490-504; October 1979.

Highlights from a literature review, a survey of current practices, and a set of case studies are presented.

Gibney, Thomas and Karns, Edward. Mathematics Education--1955-1975: A Summary of the Findings. Educational Leadership 36: 356-359; February 1979.

This review of a national study of mathematics education indicated that content was traditional, teaching was from textbooks, and little supervision was provided. (grades K-12)

Glaser, Robert. Trends and Research Questions in Psychological Research on Learning and School. Educational Researcher 8: 6-14; November 1979.

"Psychological research" on mathematical skill and understanding is briefly summarized.

Hughes, Rowland. What Mathematical Knowledge Do Tom and Linda Have When They Enter School? School Science and Mathematics 79: 279-286; April 1979.

Results from several studies are cited. (preschool, grade K)

Mayer, Richard E. Can Advance Organizers Influence Meaningful Learning? Review of Educational Research 49: 371-383; Spring 1979. [college]

Radatz, Hendrik. Error Analysis in Mathematics Education. Journal

for Research in Mathematics Education 10: 163-172; May 1979.

Research suggests a classification of errors and their causes in terms of information-processing mechanisms.

Suydam, Marilyn N. and Weaver, J. F. Research on Mathematics Education Reported in 1978. Journal for Research in Mathematics Education 10: 241-320; July 1979.

This ninth annual annotated listing includes 15 research summaries, 215 journal-published reports, and 343 dissertations for kindergarten through post-secondary levels. An index cites articles by focus.

The State of Pre-College Science Education. MOSAIC 10: 19-24; May/June 1979. [grades K-12]

Journal-Published Reports

This section contains 161 articles. The list of journals searched and the number of articles from each source may be found at the end of the total listing.

Adams, Verna M. and McLeod, Douglas B. The Interaction of Field Dependence/Independence and the Level of Guidance of Mathematics Instruction. Journal for Research in Mathematics Education 10: 347-355; November 1979.

No interactions between treatment and field dependence/independence were found, but there was a significant interaction with crystalized ability on the retention test. (college)

Adelman, Howard; Taylor, Linda; Fuller, Williamson; and Nelson, Perry. Discrepancies Among Student, Parent, and Teacher Ratings of the Severity of a Student's Problems. American Educational Research Journal 16: 38-41; Winter 1979. [ages 6-18]

Af Ekenstam, Adolf and Nilsson, Margita. A New Approach to the Assessment of Children's Mathematical Competence. Educational Studies in Mathematics 10: 41-66; February 1979.

Data from tests in which items were selected from five subtests indicated that students thought in patterns, and did not understand many essential points. (age 16)

Aiken, Lewis R. Attitudes Toward Mathematics and Science in Iranian Middle Schools. School Science and Mathematics 79: 229-234; March 1979. [grades 6-8]

Alderman, Donald L.; Swinton, Spencer S.; and Braswell, James S. Assessing Basic Arithmetic Skills and Understanding Across Curricula. Journal of Children's Mathematical Behavior 2: 3-28; Spring 1979.

Revisions to the format and notation of the test led to a decrease

in correct responses. The CAI group still scored better than the non-CAI group. However, children viewed physical materials as an additional symbol system. (grade 5)

Anderson, David R. and Clark, Alice T. Recognition of Correct Justifications for Conservation by Conservers and Partial Conservers. Psychological Reports 44: 1098; June 1979. [grade 1]

Arehart, John E. Student Opportunity to Learn Related to Student Achievement of Objectives in a Probability Unit. Journal of Educational Research 72: 253-259; May/June 1979.

Achievement of an objective was, in general, related to students' opportunity to learn it, assessed by type of teacher verbal behavior. (grades 8-11)

Austin, Joe Dan. High School Calculus and First-Quarter College Calculus Grades. Journal for Research in Mathematics Education 10: 69-72; January 1979.

Grades were improved by a half year or more of high school calculus. (college)

Aviv, Cherie Adler and Cooney, Thomas J. Results of a Questionnaire on Secondary Mathematics Teacher-Education Programs. Mathematics Teacher 72: 530-536; October 1979.

Data on course requirements and type of activities are reported. (preservice)

Ayers, Jerry B.; Cannella, Gaile S.; and Search, Janis M. Geometric Embedded Figure Identification and Construction by Lower Grade Children. School Science and Mathematics 79: 677-689; December 1979.

No difference in figure identification was found between boys and girls, and no differences between grade levels were found after instruction. (grades K-2)

Ayers, Jerry B. and Qualls, Glenda S. Concurrent and Predictive Validity of the National Teacher Examinations. Journal of Educational Research 73: 86-92; November/December 1979. [teachers]

Beattie, Ian D. Children's Strategies for Solving Subtraction-Fact Combinations. Arithmetic Teacher 27: 14-15; September 1979.

Strategies to derive answers to unknown facts, drawn from interviews with 98 pupils, are described. (grades 4-6)

Bergan, John R.; Byrnes, Ian M.; and Kratochwill, Thomas R. Effects of Behavioral and Medical Models of Consultation on Teacher Expectancies and Instruction of a Hypothetical Child. Journal of School Psychology 17: 307-316; Winter 1979. [teachers in grades 1, 2]

Bishop, Alan J. Visualising and Mathematics in a Pre-Technological Culture. Educational Studies in Mathematics 10: 135-146; May 1979. [college]

Blustein, Joshua and Lester, David. Locus of Control and Remedial Students. Psychological Reports 44: 54; February 1979. [college]

Boucher, C. Robin and Deno, Stanley L. Learning Disabled and Emotionally Disturbed: Will the Labels Affect Teacher Planning? Psychology in the Schools 16: 395-402; July 1979. [teachers]

Bright, George W. Measuring Experienced Teachers' Linear Estimation Skills at Two Levels of Abstraction. School Science and Mathematics 79: 161-164; February 1979.

There did not appear to be a relationship between estimating physical measurements and choosing the greater measurement in a symbols mode. (teachers in grades 6-8)

Bright, George W. Identification of Embedded Figures by Prospective Elementary School Teachers. School Science and Mathematics 79: 322-327; April 1979.

Non-overlapping figures were identified first; triangles were easier to identify than quadrilaterals. (elementary preservice)

Bright, George W.; Harvey, John G.; and Wheeler, Margariete Montague. Using Games to Retrain Skills with Basic Multiplication Facts. Journal for Research in Mathematics Education 10: 103-110; March 1979.

Two games were effective in retraining skills with multiplication facts. (grades 4-6)

Bright, George W.; Harvey, John G.; and Wheeler, Margariete Montague. Incorporating Instructional Objectives into the Rules for Playing a Game. Journal for Research in Mathematics Education 10: 356-359; November 1979.

No significant difference in multiplication basic fact achievement was found between groups playing MULTIG with or without multiplication involved in scoring. (grades 3, 4)

Brooks, Sarah and Hartz, Mary. Student Placement--A Comparison of Traditional and Computerized Branching Test Administrations. Journal for Research in Mathematics Education 10: 213-216; May 1979.

The two test forms placed students in "much the same manner"; the computerized test took less time. (community college)

Bunt, Don D. Perception of Arithmetic Skill Competencies of Students Entering an Urban State University. Journal of the Association for the Study of Perception 14: 12-16; Spring 1979.

The proportion of students demonstrating each desired behavior is reported. (college)

Caldwell, Janet H. and Goldin, Gerald A. Variables Affecting Word Problem Difficulty in Elementary School Mathematics. Journal for Research in Mathematics Education 10: 323-336; November 1979.

Concrete problems were significantly easier than abstract; hypothetical problems were easier than factual. (grades 4-6)

Campbell, Patricia F. Artistic Motion Cues, Number of Pictures, and First-Grade Children's Interpretation of Mathematics Textbook Pictures. Journal for Research in Mathematics Education 10: 148-153; March 1979.

The number of pictures had a significant effect on pupils' perception of mathematical relationships. Artistic motion cues aided interpretation. (grade 1)

Cappadona, D. L. and Kerzner-Lipsky, D. Prediction of School Mathematical Achievement from Motivation, Self-Concept, Teachers' Ratings and Ability Measures. School Science and Mathematics 72: 140-144; February 1979.

A combination of personality variables and teachers' ratings was found to explain more than 50 per cent of the variance in achievement; ratings were most significant. (grade 7)

Ceci, Stephen J. and Peters, Douglas P. Memory, Mathematics, and Cognitive Functioning. Focus on Learning Problems in Mathematics 1: 39-42; April 1979.

Children who were "flexible" at retrieving information from memory were faster at performing subtraction with bridging than were "inflexible" children. (age 10)

Clement, John. Patterns in Joey's Comments on Arithmetic Problems. Journal of Children's Mathematical Behavior 2: 58-68; Spring 1979.

A case study on one child's responses when doing addition and subtraction examples is presented. (grade 3)

Cohen, Martin P. Scientific Interest and Verbal Problem Solving: Are They Related? School Science and Mathematics 79: 404-408; May/June 1979.

No evidence was found that interests could be used to predict the problem setting with which a student would be most successful. (grade 8)

Cohen, Richard; Rubin, Sandra; and Keinen, James R. K. Collateral Increases in Performance of Long Division Resulting from On-Task Gains Using Token Reinforcement and Self-Recording. Psychological Reports 44: 651-658; April 1979.

Techniques used with one student were evaluated. (age 14)

Conklin, Jonathan E.; Burstein, Leigh; and Keesling, J. Ward. The Effects of Date of Testing and Method of Interpolation on the Use of Standardized Test Scores in the Evaluation of Large-Scale Educational Programs. Journal of Educational Measurement 16: 239-246; Winter 1979. [grade 2]

Cowan, Richard. Performance in Number Conservation Tasks as a Function of the Number of Items. British Journal of Psychology 70:

77-81; February 1979. [age 5]

Cowan, Richard. A Reappraisal of the Relation Between Performances of Quantitative Identity and Quantitative Equivalence Conservation Tasks. Journal of Experimental Child Psychology 28: 68-80; August 1979. [ages 4-6]

Creswell, John L. and Vaughn, Larry R. Hand-Held Calculator Curriculum and Mathematical Achievement and Retention. Journal for Research in Mathematics Education 10: 364-367; November 1979.

The calculator groups (using a specially designed curriculum) scored significantly higher than the non-calculator group. (grade 9)

Dangel, Richard F. and Hopkins, B. L. The Effects of Different-Length Assignments on Classroom Deportment and Academic Performance. Journal of Educational Research 72: 303-309; July/August 1979.

Longer mathematics assignments increased the percent of intervals of appropriate student behavior. (grades 4, 6)

Davis, Robert B.; McKnight, Curtis; Parker, Philip; and Elrick, Douglas. Analysis of Student Answers to Signed Number Arithmetic Problems. Journal of Children's Mathematical Behavior 2: 114-130; Spring 1979.

Results from a test (programed on PLATO) given to one class are reported; thought processes were inferred from student response records. (grade 5)

Dawes, W. G. and Jesson, D. St. J. Is There a Basis for Specifying the Mathematical Requirements of the 16 Year Old Entering Employment? International Journal of Mathematical Education in Science and Technology 10: 391-400; July-September 1979. [age 16]

Days, Harold C.; Wheatley, Grayson H.; and Kulm, Gerald. Problem Structure, Cognitive Level, and Problem-Solving Performance. Journal for Research in Mathematics Education 10: 135-146; March 1979.

Formal-operational students used a larger variety of processes than concrete-operational students. Both used a larger variety of processes on complex-structure problems than on simple problems. (grade 8)

Deatsman, Gary A. An Experimental Evaluation of Retesting. American Mathematical Monthly 86: 51-53; January 1979.

Retesting did not appear to benefit students. (college freshmen)

DeAvila, Edward and Pulos, Steven. Group Assessment of Cognitive Level by Pictorial Piagetian Tasks. Journal of Educational Measurement 16: 167-175; Fall 1979. [ages 7-11]

Dickson, Linda. A Case Study Based on the Mathematical Achievements and Experiences of Ten London Transport Craft Apprentices. International Journal of Mathematical Education in Science and

Technology 10: 251-278; April-June 1979. [adult]

DiVincenzo, Robert M. Clustering-Operations: A More Efficient Alternative for Teaching Common Fraction Operations. School Science and Mathematics 79: 328-332; April 1979.

The group taught about the four operations with fractions at once achieved significantly better than the group taught with the usual textbook. (grade 6)

Dusek, Jerome B.; Kermis, Marguerite D.; and Monge, Rolf H. The Hierarchy of Adolescent Interests: A Social-Cognitive Approach. Genetic Psychology Monographs 100: 41-72; August 1979. [grades 5-12]

Eastman, Phillip M. and Barnett, Jeffrey C. Further Study of the Use of Manipulatives with Prospective Teachers. Journal for Research in Mathematics Education 10: 211-213; May 1979.

No significant differences in use of materials or on the concepts test were found between groups taught with or without materials. (elementary preservice)

Ebmeier, Howard and Good, Thomas L. The Effects of Instructing Teachers About Good Teaching on the Mathematics Achievement of Fourth Grade Students. American Educational Research Journal 16: 1-16; Winter 1979.

Use of the direct instruction model proved effective. Interactions among student type, teacher type, and treatment type are discussed. (teachers in grade 4)

Emmer, Edmund T. and Evertson, Carolyn M. Stability of Teacher Effects in Junior High Classrooms. American Educational Research Journal 16: 71-75; Winter 1979.

Strong teacher effects on pupil attitudes in both mathematics and English were found. (teachers in grades 7, 8)

Erlich, Oded and Borich, Gary. Occurrence and Generalizability of Scores on a Classroom Interaction Instrument. Journal of Educational Measurement 16: 11-18; Spring 1979. [teachers in grades 2, 3]

Estes, Katherine W. The Role of Preference in Children's Responses to More and Less. Genetic Psychology Monographs 100: 233-256; November 1979. [pre-kindergarten, kindergarten]

Evans, Mary Ann. A Comparative Study of Young Children's Classroom Activities and Learning Outcomes. British Journal of Educational Psychology 49: 15-26; February 1979. [grades 1, 2]

Feuerstein, Reuven; Rand, Ya'acov; Hoffman, Malka; Hoffman, Mendel; and Miller, Ronald. Cognitive Modifiability in Retarded Adolescents: Effects of Instrumental Enrichment. American Journal of Mental Deficiency 83: 539-550; May 1979. [ages 12-15]

Fischbein, E.; Tirosh, D.; and Hess, P. The Intuition of Infinity. Educational Studies in Mathematics 10: 3-40; February 1979.

The intuition of infinity appeared to be relatively stable from about grade 7. Regular mathematical training did not appear to affect intuition. (grades 5-9)

Fischbein, Siv. Biosocial Aspects of Mathematics Learning. Scandinavian Journal of Educational Research 23: 1-14; 1979. [grades 3, 6]

Fornessa, Steven R.; Silverstein, Arthur B.; and Guthrie, Donald. Relationship Between Classroom Behavior and Achievement of Mildly Mentally Retarded Children. American Journal of Mental Deficiency 84: 260-265; November 1979. [mean age 10-11 (EMRs)]

Friend, Jamesine E. Column Addition Skills. Journal of Children's Mathematical Behavior 2: 29-57; Spring 1979.

Results from a test of Nicaraguan students are presented. (grades 1-6)

Gajar, Anna. Educable Mentally Retarded, Learning Disabled, Emotionally Disturbed: Similarities and Differences. Exceptional Children 45: 470-472; March 1979. [elementary]

Gast, David L.; Van Biervliet, Alan; and Spradlin, Joseph E. Teaching Number-Word Equivalences: A Study of Transfer. American Journal of Mental Deficiency 83: 524-527; March 1979.

Both retarded and preschool non-retarded children improved on matching number words, numerals, and sets. (ages 3-11)

Geeslin, William E. and Shar, Albert O. An Alternative Model Describing Children's Spatial Preferences. Journal for Research in Mathematics Education 10: 57-68; January 1979.

Results supported the distortion model, with little indication of the existence of developmental differences suggested by Piaget. (nursery school-grade 4)

Gettinger, Maribeth and White, Mary Alice. Which Is the Stronger Correlate of School Learning? Time to Learn or Measured Intelligence? Journal of Educational Psychology 71: 405-412; August 1979. [grades 4-6]

Good, Ron. Children's Abilities with the Four Basic Arithmetic Operations in Grades K-2. School Science and Mathematics 79: 93-98; February 1979.

Children solved problems involving all operations, using objects and counting. (grades K-2)

Good, Thomas L. and Grouws, Douglas A. The Missouri Mathematics Effectiveness Project: An Experimental Study in Fourth-Grade Classrooms. Journal of Educational Psychology 71: 355-362; June 1979.

Teachers implemented desired behaviors; their students generally scored higher than those of control teachers. (teachers in grade 4)

Good, Thomas L. and Grouws, Douglas A. Teaching and Mathematics Learning. Educational Leadership 37: 39-45; October 1979. [teachers in grade 4]

Grant, Francis; Paige, Don; and Sinnott, Marsha. Segregation/Integration and Black/White Math Achievement. School Science and Mathematics 79: 111-114; February 1979.

No significant gains in scores of Black students were found after integration, but White students did make significant gains. (grade 6)

Haladyna, Tom and Thomas, Gregory. The Affective Reporting System. Journal of Educational Measurement 16: 49-54; Spring 1979. [elementary]

Hamrick, Kathy B. Oral Language and Readiness for the Written Symbolization of Addition and Subtraction. Journal for Research in Mathematics Education 10: 188-194; May 1979.

"Ready" students were not affected by time of introduction of written symbolism, but those in the "not ready" group scored higher when the introduction was delayed. (grade 1)

Hart, Kathleen. Children's Understanding of Mathematics. Journal of Science and Mathematics Education in Southeast Asia 11: 28-33; January 1979.

Results of testing British children by the Concepts in Secondary Mathematics and Science Project (Chelsea) are given. (secondary)

Hassett, Matthew J. and McCoy, Kathleen M. Task Analysis: A Post-Quiz Remediation Strategy for Personalized Self-Instruction. Journal of Educational Research 73: 8-11; September/October 1979.

The group given the post-quiz task analytic remediation strategy had higher final test scores than the control group had. (college)

Hendrickson, A. Dean. An Inventory of Mathematical Thinking Done by Incoming First-Grade Children. Journal for Research in Mathematics Education 10: 7-23; January 1979.

Results on counting, grouping, joining, separating, and distributing objects are reported: children could manipulate materials and answer problems involving all four operations. (grade 1)

Ho, D. Y. F. Parental Education Is Not Correlated with Verbal Intelligence or Academic Performance in Hong Kong Pupils. Genetic Psychology Monographs 100: 3-19; August 1979. [grades 4-12]

Ho, D. Y. F. Sibship Variables as Determinants of Intellectual-Academic Ability in Hong Kong Pupils. Genetic Psychology Monographs 100: 21-39; August 1979. [grades 4-12]

Hoz, Ron. The Use of Heuristic Models in Mathematics Teaching. International Journal of Mathematics Education in Science and Technology 10: 137-151; January-March 1979.

Students using a programed unit on triangle constructions with an information-processing prescriptive model scored significantly higher than those using a traditional model. (secondary)

Humphreys, Lloyd G.; Parsons, Charles K.; and Park, Randolph K. Dimensions Involved in Differences Among School Means of Cognitive Measures. Journal of Educational Measurement 16: 63-76; Summer 1979. [grade 10]

Ironson, Gail H. and Subkoviak, Michael J. A Comparison of Several Methods of Assessing Item Bias. Journal of Educational Measurement 16: 209-225; Winter 1979. [grade 12]

Jamski, William D. The Effect of Calculators on Achievement. MATYC Journal 13: 52-56; Winter 1979.

The calculator appeared to facilitate learning on some topics (such as fraction-decimal conversion). No significant difference between calculator and non-calculator groups was found on the retention test. (grades 6-8)

Jason, Leonard A.; Ferone, Louise; and Anderegg, Thomas. Evaluating Ecological, Behavioral, and Process Consultation Interventions. Journal of School Psychology 17: 103-111; Summer 1979. [grades 1, 3]

Jason, Leonard A.; Ferone, Louise; and Soucy, Gerald. Teaching Peer-Tutoring Behaviors in First- and Third-Grade Classrooms. Psychology in the Schools 16: 261-269; April 1979. [grades 1, 3]

Johnson, David C. and Harding, Robert D. University Level Computing and Mathematical Problem-Solving Ability. Journal for Research in Mathematics Education 10: 37-55; January 1979.

Results on the problem-solving test consistently favored the groups who had had a computing course. (college)

Johnson, Janet W. and Scholnick, Ellin Kofsky. Does Cognitive Development Predict Semantic Integration? Child Development 50: 73-78; March 1979. [grades 3, 4, college]

Johnson, Roger T. and Johnson, David W. Type of Task and Student Achievement and Attitudes in Interpersonal Cooperation, Competition, and Individualization. Journal of Social Psychology 108: 37-48; June 1979. [grade 5]

Judd, Susan A. and Mervis, Carolyn B. Learning to Solve Class-Inclusion Problems: The Roles of Quantification and Recognition of Contradiction. Child Development 50: 163-169; March 1979.

Pupils who counted but were not made aware of the contradiction between their counting and their answers performed as poorly as pupils who did not count. Training resulted in better scores. (age 5)

Kerslake, Daphne. Visual Mathematics. Mathematics in the School 8: 34-35; March 1979.

Five experiments were reported, in an attempt to establish whether elementary school children find it difficult to identify certain geometrical shapes when presented in less-usual orientations. (elementary)

Kulm, Gerald and Days, Harold. Information Transfer in Solving Problems. Journal for Research in Mathematics Education 10: 94-102; March 1979.

Solution of related problems helped students focus on relevant strategies, but distantly related structures or different contexts appeared to interfere with transfer. (college)

Kurtz, Barry and Karplus, Robert. Intellectual Development Beyond Elementary School VII: Teaching for Proportional Reasoning. School Science and Mathematics 79: 387-398; May/June 1979.

The three-week teaching program was found to be effective in advancing proportional reasoning. Problem-solving procedures were "internalized" by about half the students; however, the formulation of algebraic equations were not. (secondary)

Land, M. L. and Smith, Lyle R. Effect of a Teacher Clarity Variable on Student Achievement. Journal of Educational Research 72: 196-197; March/April 1979.

Students taught a mathematics topic with clear terms achieved more than students taught with vague terms. (college)

Leinhardt, Gaea; Seewald, Andrea Mar; and Engel, Mary. Learning What's Taught: Sex Differences in Instruction. Journal of Educational Psychology 71: 432-439; August 1979.

Teachers made more academic contacts and spent more cognitive time with girls in reading and with boys in mathematics. (teachers in grade 2)

Lepore, Angela V. A Comparison of Computational Errors Between Educable Mentally Handicapped and Learning Disability Children. Focus on Learning Problems in Mathematics 1: 12-33; January 1979.

Errors made by old and young members of each group are depicted and discussed. (mean age 10-13)

Lichtman, David. Survey of Educator's Attitudes Toward Computers. Creative Computing 5: 48-50; January 1979.

Fifty-eight per cent of the teachers and 52 per cent of the administrators felt that "computers can teach mathematics". (teachers, administrators)

Luchins, Abraham S. and Luchins, Edith H. Geometric Problem Solving Related to Differences in Sex and Mathematical Interests. Journal of Genetic Psychology 134: 255-269; June 1979.

The percentage needing all four hints was highest for male

non-mathematics majors and next highest for female mathematics majors. (college)

Malin, Jane T. Strategies in Mathematical Problem Solving. Journal of Educational Research 73: 101-108; November/December 1979.

Efficiency of strategies depended on the number of steps in the problem solution, the number of possible blind alleys, and memory load. (grade 9)

Malone, Thomas W.; Suppes, Patrick; Macken, Elizabeth; Zanotti, Mario; and Kanerva, Lauri. Projecting Student Trajectories in a Computer-Assisted Instruction Curriculum. Journal of Educational Psychology 71: 74-84; February 1979.

Ten models for predicting achievement in reading and mathematics CAI drill programs were tested. (grades 3-6)

Marjoribanks, Kevin. Ethclass, the Achievement Syndrome, and Children's Cognitive Performance. Journal of Educational Research 72: 327-333; July/August 1979. [age 11]

Marjoribanks, Kevin. Intelligence, Social Environment, and Academic Achievement: A Regression Surface Analysis. Journal of Experimental Education 47: 346-351; Summer 1979. [ages 11, 12, 15]

McCallum, D. I.; Smith, I. Macfarlane; and Eliot, J. Further Investigation of Components of Mathematical Ability. Psychological Reports 44: 1127-1133; June 1979.

Spatial ability was associated with understanding of mathematics; other factors were also determined. (ages 12, 14)

McDonald, Rita T. and Gawkoski, Roman S. Predictive Value of SAT Scores and High School Achievement for Success in a College Honors Program. Educational and Psychological Measurement 39: 411-414; Summer 1979.

The Verbal and Mathematics portions of the SAT and high school GPA had moderate predictive validity for the entire group. Only the Mathematics portion for women had practical usefulness in predicting success in the Honors Program. (college)

McLeod, Douglas B. and Adams, Verna M. Individual Differences in Cognitive Style and Discovery Approaches to Learning Mathematics. Journal of Educational Research 72: 317-320; July/August 1979.

Achievement was significantly higher for the high-guidance group than for the low-guidance group; no aptitude interactions were found. (college)

Meyer, Wulf-Uwe; Bachmann, Meinolf; Biermann, Ursala; Hempelmann, Marianne; Ploger, Fritz-Otto; and Spiller, Helga. The Informational Value of Evaluative Behavior: Influences of Praise and Blame on Perceptions of Ability. Journal of Educational Psychology 71: 259-268; April 1979. [grades 3-9, 12-13, adults]

Miller, Scott A. Candy Is Dandy and Also Quicker: A Further Nonverbal Study of Conservation of Number. Journal of Genetic Psychology 134: 15-21; March 1979. [grades K, 1]

Morrow, Betty Hearn. Elementary School Performance of Offspring of Young Adolescent Mothers. American Educational Research Journal 16: 423-429; Fall 1979. [age 8]

Muller, David. Perceptual Reasoning and Proportion. Mathematics Teaching 87: 20-22; June 1979. [elementary]

Panunto, Brenda and White, Donna. Achievement and the Prediction of Achievement in English First and Second Language Children. Alberta Journal of Educational Research 25: 61-67; June 1979. [grade 1]

Paul, Clyde A. Bald Eagles, Sperm Whales, and Mathematics Teachers. Mathematics Teacher 72: 424-427; September 1979.

Data on the declining number of teachers in Missouri graduated from 1973 to 1978 are discussed. (secondary)

Peck, Donald M. and Jencks, Stanley M. Differences in Learning Styles--An Interview with Kathy and Tom. Journal of Children's Mathematical Behavior 2: 83-88; Spring 1979.

Interviews with two students are presented, with analysis of their learning styles, one emphasizing memory and the other common sense. (grade 7)

Peng, Samuel S. and Jaffe, Jay. Women Who Enter Male-Dominated Fields of Study in Higher Education. American Educational Research Journal 16: 285-293; Summer 1979. [adults]

Perry, Joseph D.; Guidubaldi, John; and Kehle, Thomas J. Kindergarten Competencies as Predictors of Third-Grade Classroom Behavior and Achievement. Journal of Educational Psychology 71: 443-450; August 1979. [grade 3]

Peterson, Penelope L. and Janicki, Terence C. Individual Characteristics and Children's Learning in Large-Group and Small-Group Approaches. Journal of Educational Psychology 71: 677-687; October 1979.

No significant difference in achievement was found between the two groups, but some aptitude-treatment interactions were found. (grades 4-6)

Petitto, Andrea. The Role of Formal and Non-Formal Thinking in Doing Algebra. Journal of Children's Mathematical Behavior 2: 69-82; Spring 1979.

Interviews with nine students solving algebra problems are analyzed. The need for both intuition and formality was one conclusion. (grade 9)

Pfeffer, W. F.; Melcon, D. P.; and Fenech, A. P. A Computer-Graded Examination Technique with a Human Face. American Mathematical

Monthly 86: 586-589; August/September 1979.

No significant difference in scores was found between students given or not given test items at the beginning of the course. (college)

Piersel, Wayne C. and Kratochwill, Thomas R. Self-Observation and Behavior Change: Applications to Academic and Adjustment Problems Through Behavioral Consultation. Journal of School Psychology 17: 151-161; Summer 1979. [grades 2, 4, 7, 9]

Pigge, Fred L.; Gibney, Thomas C.; and Ginther, John L. Today's Elementary School Teachers Are Better Prepared in Mathematics. Arithmetic Teacher 26: 48-51; March 1979.

Mean test scores were significantly higher in 1975-77 than 1967-69, except for one subtest on fractions. (elementary pre- and in-service)

Pittman, Robert B. Situational Referents of an Academic Setting and Locus of Control. Journal of Experimental Education 47: 290-296; Summer 1979. [grades 6, 7]

Plake, Barbara S. and Hoover, H. D. The Comparability of Equal Raw Scores Obtained from In-Level and Out-of-Level Testing: One Source of the Discrepancy Between In-Level and Out-of-Level Grade Equivalent Scores. Journal of Educational Measurement 16: 271-278; Winter 1979. [grades 4-8]

Preece, Muriel. Mathematics: The Unpredictability of Girls? Mathematics Teaching 87: 27-29; June 1979. [--]

Protinsky, Howard O. and Hughston, George A. Piagetian Task Performance of Black Adolescents. Psychological Reports 44: 983-984; June 1979. [ages 12-17]

Protinsky, Howard and Hughston, George. Adolescent Conservation. Journal of Genetic Psychology 135: 157-158; September 1979. [adolescents]

Radatz, Hendrik. Some Aspects of Individual Differences in Mathematics Instruction. Journal for Research in Mathematics Education 10: 359-363; November 1979.

Reflective pupils had better achievement than impulsive pupils; specific topics contributing to this were analyzed. (grade 4)

Rand, Ya'acov; Tannenbaum, Abraham J.; and Feuerstein, Reuven. Effects of Instrumental Enrichment on the Psychoeducational Development of Low-Functioning Adolescents. Journal of Educational Psychology 71: 751-763; December 1979. [ages 12-15]

Rankowski, Charles A. and Glaey, Minaruth. Effectiveness of Multimedia in Teaching Descriptive Geometry. ECTJ 27: 114-120; Summer 1979.

No significant difference in achievement was found between groups

taught by a multimedia or conventional approach. (college)

Roach, D. A. The Effects of Conceptual Style Preference, Related Cognitive Variables and Sex on Achievement in Mathematics. British Journal of Educational Psychology 49: 79-82, February 1979.

Mathematics achievement had significant positive correlations with analytic conceptual style and intelligence; girls had higher achievement than boys. (grade 6)

Roberge, James J. and Flexer, Barbara K. Further Examination of Formal Operational Reasoning Abilities. Child Development 50: 478-484; 1979. [grade 8, adults]

Robinson, Mary L. An Experiment in Teaching Group-Cooperation on Mathematics Tasks. School Science and Mathematics 79: 201-206; March 1979.

Pupils were able to learn to multiply and divide using a slide rule with teacher direction. (grade 6)

Ronshausen, Nina L. The Effect on Mathematics Achievement of Programed Tutoring as a Method of Individualized, One-to-One Instruction. Journal of Experimental Education 47: 268-276; Summer 1979.

Significant differences in achievement favored the group given "programed tutoring" in three field studies. (grades K, 1)

Russac, R. J. The Early Acquisition of Relational Concepts: Equivalency and Nonequivalency. Focus on Learning Problems in Mathematics 1: 43-50; April 1979.

The extent to which perceptual, counting, and pairing strategies were used was ascertained. (ages 3-6)

Satterly, D. J. Covariation of Cognitive Styles, Intelligence, and Achievement. British Journal of Educational Psychology 49: 179-181; June 1979. [ages 10-11]

Saxe, Geoffrey B. Developmental Relations Between Notational Counting and Number Conservation. Child Development 50: 180-187; March 1979.

Children appeared to develop counting strategies before number conservation concepts. (ages 4-9)

Schell, Leo M. and Courtney, Dan. The Effect of Male Teachers on the Academic Achievement of Father-Absent Sixth Grade Boys. Journal of Educational Research 72: 194-196; March/April 1979. [grade 6]

Schoenfeld, Alan H. Explicit Heuristic Training as a Variable in Problem-Solving Performance. Journal for Research in Mathematics Education 10: 173-187; May 1979.

Four students taught heuristics significantly outperformed three other students on similar problems. (college)

Scott, Dennis L. and Webb, Leland F. The Effects of Spacing and

Handwritten or Typed Tests upon Achievement of Students in Algebra and Geometry Classes. School Science and Mathematics 79: 663-669; December 1979.

No significant differences in achievement were found on tests using varying formats. (grades 9-11)

Sewell, Trevor E. Intelligence and Learning Tasks as Predictors of Scholastic Achievement in Black and White First-Grade Children. Journal of School Psychology 17: 325-332; Winter 1979. [grade 1]

Shann, Mary H. Children's Discrimination Between Enjoyment and Value of Arithmetic. Journal for Research in Mathematics Education 10: 153-158; March 1979.

Factor analyses consistently indicated that students distinguished between enjoyment and value in attitudes toward arithmetic but not science. (grades 4-8)

Shannon, A. G. and Clark, B. E. Mathematical Attitudes of Some Polytechnic Students. British Journal of Educational Technology 10: 59-68; January 1979. [college freshmen]

Sheehan, Daniel S. Black Achievement in a Desegregated School District. Journal of Social Psychology 107: 185-192; April 1979. [grades 4-6]

Sheehan, Daniel S. and Davis, Robbie G. The Development and Validation of a Criterion-Referenced Mathematics Battery. School Science and Mathematics 79: 125-132; February 1979.

The three diagnostic subtests were found to be "moderately to highly" consistent. (grades K-8)

Sherman, Julia. Predicting Mathematics Performance in High School Girls and Boys. Journal of Educational Psychology 71: 242-249; April 1979.

Ninth-grade scores significantly predicted mathematics performance one to three years later. Spatial visualization was a significant predictor for girls in geometry and problem solving. (grades 9-12)

Sherrill, James M. Subtraction: Decomposition Versus Equal Addends. Arithmetic Teacher 27: 16-17; September 1979.

The decomposition approach was superior in accuracy to the equal addends approach. (grade 3)

Shrigley, Robert L. and Trueblood, Cecil R. Designing a Likert-Type Scale to Assess Attitude Toward Metrication. Journal of Research in Science Teaching 16: 73-78; January 1979.

The 22-item scale had a reliability of .91. (elementary preservice)

Silver, Edward A. Student Perceptions of Relatedness Among Mathematical Verbal Problems. Journal for Research in Mathematics Education 10: 195-210; May 1979.

The extent to which a student sorted problems on the basis of mathematical structure was significantly related to problem-solving ability as well as other abilities. (grade 8)

Smith, Horace G. Investigation of Several Techniques for Reviewing Audio-Tutorial Instruction. ECTJ 27: 195-204; Fall 1979.

Use of a study guide or a summary of the audiotape lesson aided retention of a mathematics topic. (community college)

Smith, Lyle R. Task-Oriented Lessons and Student Achievement. Journal of Educational Research 73: 16-19; September/October 1979.

A high degree of classroom activity (questioning) focusing on the relevant content positively influenced achievement. (teachers in grade 9)

Smith, Walter S. and Litman, Cynthia I. Early Adolescent Girls' and Boys' Learning of a Spatial Visualization Skill. Science Education 63: 671-676; October 1979. [grades 6, 7]

Smith, Walter S. and Schroeder, Cynthia K. Instruction of Fourth Grade Girls and Boys on Spatial Visualization. Science Education 63: 61-66; January 1979. [grade 4]

Sparks, Rebecca. Mathematical Skills Reinforced the Fun Way. School Science and Mathematics 79: 70-73; January 1979.

Games were found to be effective as a reinforcing activity. (grade K)

Stamp, Peggy. Girls and Mathematics: Parental Variables. British Journal of Educational Psychology 49: 39-50; February 1979.

Girls achieving well in French and in mathematics both tended to identify with their fathers rather than their mothers. Some differences for mathematics students were noted, however. (grade 12)

Stoodley, Keith D. C. Attitudes of Maths Pupils to Maths Degrees. Educational Research 21: 147-148; 1979. [grade 12]

Swadener, Marc. What Mathematics Skills Hiring Officials Want. Mathematics Teacher 72: 444-447; September 1979.

Data on 36 mathematical competencies rated by 22 hiring officials are presented. (--)

Swanson, Lee. Partially Sighted Children's Conservation Development. Journal of Genetic Psychology 135: 153-154; September 1979. [ages 6-15]

Swanson, Lee; Minifie, Darrel; and Minifie, Elsie. Conservation Development in the Partially Sighted Child. Psychology in the Schools 16: 309-313; April 1979. [ages 6-15]

Szetela, Walter. Hand-Held Calculators and the Learning of Trigonometric Ratios. Journal for Research in Mathematics Education 10: 111-118; March 1979.

Calculator groups scored significantly higher than non-calculator groups on a quiz one week prior to the end of the study, but no differences were found on the final achievement test or attitude measure. (grades 9, 10)

Taloumis, Thalia. Scores on Piagetian Area Tasks as Predictors of Achievement in Mathematics over a Four-Year Period. Journal for Research in Mathematics Education 10: 120-134; March 1979.

Some Piagetian tasks contributed significantly to the prediction of achievement, especially when given in grade 2. (grades 1-3)

Thompson, Richard B. and McCoy, Jan S. Student Pacing or Instructor Pacing? American Mathematical Monthly 86: 217-221; March 1979.

Instructor pacing was superior to student pacing in college algebra and probably intermediate algebra, but not introductory algebra. (college)

Thornton, Carol A. Basic Fact Mastery: Guides to Success for the LD Child. Focus on Learning Problems in Mathematics 1: 34-42; January 1979.

Instruction on basic fact strategies was found to be effective. (grades 3-5)

Threadgill, Judith Ann. The Relationship of Field-Independent/Dependent Cognitive Style and Two Methods of Instruction in Mathematics Learning. Journal for Research in Mathematics Education 10: 219-222; May 1979.

No significant achievement difference was found between groups taught by didactic or guided discovery approaches. Field-independent students achieved better than field-dependent students. (grade 7)

Threadgill, Judith. The Interaction of Learner Aptitude with Types of Questions Accompanying a Written Lesson on Logical Implications. Journal for Research in Mathematics Education 10: 337-346; November 1979.

Applied questions were more effective than no questions for students with low aptitude scores, but did not differentially affect high-aptitude students. (grade 10)

Uguroglu, Margaret E. and Walbert, Herbert J. Motivation and Achievement: A Qualitative Synthesis. American Educational Research Journal 16: 375-389; Fall 1979. [grades 1-12]

Watkins, Ann E. The Symbols and Grammatical Structures of Mathematical English and the Reading Comprehension of College Students. Journal for Research in Mathematics Education 10: 216-218; May 1979.

Students generally achieve better using materials written in ordinary English. (college)

Webb, Norman L. Processes, Conceptual Knowledge, and Mathematical

Problem-Solving Ability. Journal for Research in Mathematics Education 10: 83-93; March 1979.

Conceptual knowledge accounted for 50 per cent of the variance in scores on a problem-solving inventory; heuristic strategy components accounted for an additional 13 per cent. (grade 11)

Webster, Raymond E. Visual and Aural Short-Term Memory Capacity Deficits in Mathematics Disabled Students. Journal of Educational Research 72: 277-283; May/June 1979.

The mathematics-disabled students recalled more information with the visual presentation, while proficient students were better on aural presentations of serial lists. (grade 6)

Wheatley, Grayson H.; Shumway, Richard J.; Coburn, Terrence G.; Reys, Robert E.; Schoen, Harold L.; Wheatley, Charlotte L.; and White, Arthur L. Calculators in Elementary Schools. Arithmetic Teacher 27: 18-25; September 1979.

No significant differences in achievement or attitudes were found between calculator and non-calculator groups. (grades 2-6)

Whitely, Susan E. and Doyle, Kenneth O., Jr. Validity and Generalizability of Student Ratings from Between-Classes and With-Class Data. Journal of Educational Psychology 71: 117-124; February 1979.

Most ratings of students in a beginning mathematics course were highly generalizable, but only some were related to learning. (college)

Whitley, Theodore W. The Effects of Individualized Instruction on the Attitudes of Middle School Pupils. Journal of Educational Research 72: 188-193; March/April 1979. [grades 5-7]

Widerstrom, A. H.; Jengeleski, J. L.; and Chansky, N. M. Predicting Freshman GPA of Law/Justice Students. Educational and Psychological Measurement 39: 439-443; Summer 1979. [college]

Wilson, Rose; Parker, Timothy; Stevenson, Harold W.; and Wilkinson, Alex. Perceptual Discrimination as a Predictor of Achievement in Reading and Arithmetic. Journal of Educational Psychology 71: 220-225; April 1979. [grades K-3]

Young, Courtney D., Jr. and Becker, Jerry P. The Interaction of Cognitive Aptitudes with Sequences of Figural and Symbolic Treatments of Mathematical Inequalities. Journal for Research in Mathematics Education 10: 24-36; January 1979.

Some significant predictor variables and interactions were identified; the midtest predicted retention for two of four treatments. (grades 9, 11)

Zinkus, Peter W. and Gottlieb, Marvin I. Patterns of Perceptual Deficits in Academically Deficient Juvenile Delinquents. Psychology in the Schools 16: 19-27; January 1979. [ages 13-18]

Dissertation Abstracts

This final section of the listing contains 408 dissertations.

Abraham, Katherine. The Graduate Record Examination Aptitude Test Scores as Predictors of Success for Doctoral Candidates at the University of Mississippi. (The University of Mississippi, 1979.) DAI 40A: 1751; October 1979. [7921510] [college]

Agrawal, Piyush Chandra. An Analysis of Individual and Team Effects on Prescriptive and Catalytic Modes of Staff Development with Specific Reference to Metric Education. (State University of New York at Albany, 1979.) DAI 40A: 800-801; August 1979. [7918227]

The catalytic mode with team intervention was found to be most effective. (elementary in-service)

Agris, Myrna Skobel. A Study to Determine the Effect of a Student Programmed Tutoring Project in First Grade Reading. (University of Pennsylvania, 1979.) DAI 40A: 3105; December 1979. [7926227] [grades 1, 5, 6]

Aiello, Thomas George. The Use of Structure-of-Intellect Variables in the Discrimination of Four Types of Error-Makers in the Addition of Fractions. (Boston University School of Education, 1978.) DAI 39A: 5378; March 1979. [7904999]

Factors associated with systematic, careless, random, and no errors were identified. (grade 7)

Alexander, Mary Elizabeth. Relationship of Selected Feedback Conditions to Teacher Behavior Change. (New York University, 1978.) DAI 39A: 7230-7231; June 1979. [7911223] [secondary in-service]

Alexander, Thomas Lamar. The Effects of an Alternative System of Instruction on the Achievement and Attitude of Elementary Algebra Students in an Urban University. (The University of Alabama, 1978.) DAI 39A: 5378-5379; March 1979. [7905384]

The group taught by a mastery learning strategy achieved significantly higher gains than the group taught by a lecture method. (college)

Alexander, William. Pupil Achievement, Attendance Rate, and Teacher Attitudes Toward Pupils in Differing Organizational Climates. (Northeast Louisiana University, 1978.) DAI 39A: 5216; March 1979. [7904875]

Significant differences in mathematical achievement were found due to teacher attitudes and some interaction effects. (grades 3-5)

Allison, Ronald Leslie. Student and Parent Expectations for the Mathematics Advanced Placement Program. (New York University, 1978.) DAI 39A: 4789; February 1979. [7824067]

Differences between students and parents were found on immediate expectations, preference for acceleration or enrichment, and

evaluation of the program. (secondary)

Alvarez, Manuel Sotelo. A Problem Sequence Development of Linear Partial Differential Equations for Advanced Undergraduates. (Columbia University, 1978.) DAI 39B: 4924; April 1979. [7908573]

A sequence of problems designed to relate mathematical areas is presented. (college)

Aman, George Bernard. An Analysis of the Relative Effectiveness of Various Remedial Mathematics Programs Financed by Title I, ESEA Funds in New York State. (Syracuse University, 1978.) DAI 39A: 6001; April 1979. [7908522]

The average growth for participants in various programs was 13.9 months for each year in school. Computer-assisted instruction programs failed to show the results of mathematics laboratory, small group, and tutorial programs. (elementary)

Amstutz, Nancy Clark. An Investigation of the Relationship Among Cognitive Flexibility, Reflective-Impulsive Cognitive Style and Performance on Academic Tasks at Three Difficulty Levels. (Clark University, 1979.) DAI 40A: 1955; October 1979. [7923162] [grade 3]

Anderson, Margaret Coppock. The Use of a Human Figure Drawing Scale to Discriminate Among Developmental Stages in the Child's Conception of Unfolding Geometric Solids. (Southern Illinois University at Carbondale, 1978.) DAI 39A: 5927; April 1979. [7908000]

The HFD scale was a better predictor than grade level for all solids studied. (grades 1-6)

Arehart, John Edwin. The Relationship Between Ninth and Tenth Grade Student Achievement on a Probability Unit and Student Opportunity to Learn the Unit Objectives. (University of Virginia, 1978.) DAI 40A: 722; August 1979. [7916329]

Achievement was found to be related to amount of exposure. (grades 9, 10)

Assad, Saleh I. Perspectives in Mathematics Learning. (State University of New York at Buffalo, 1978.) DAI 40A: 722-723; August 1979. [7918745]

The "single letter fixation" and "reversibility orientation" were studied through analyses of textbooks and classes. (secondary, college)

Athappilly, Kuriakose Kunjavarkey. A Meta-Analysis of the Effects of Modern Mathematics in Comparison with Traditional Mathematics in the American Educational System. (Western Michigan University, 1978.) DAI 39A: 6002; April 1979. [7908643]

Meta-analysis of 134 studies indicated that modern mathematics programs led, in general, to improved learning of mathematics. (grades K-12)

Atkinson, Melvis Evans. Attitudes of Black College Freshmen in Black Colleges Toward Mathematics. (Rutgers University The State University of New Jersey (New Brunswick), 1979.) DAI 40A: 1321-1322; September 1979. [7917901]

Mathematical attitudes were positively correlated with mathematical achievement. Factors influencing both were also investigated. (college freshmen)

Attivo, Barbara Jane Almwood. The Effects of Three Instructional Strategies on Prospective Teachers' Ability to Estimate Length and Area in the Metric System. (The Pennsylvania State University, 1979.) DAI 40A: 1930; October 1979. [7922263]

No significant differences were found in the number of students reaching mastery after instruction using personal referents, a unit referent, or estimation without an explicit strategy, although some advantage was found for personal referents. (elementary preservice)

Atweh, William Foad. A Study of the Development of the Concept of Numbers from Two Perspectives: The Conceptual Learning and Development Model and the Theory of Piaget. (The University of Wisconsin-Madison, 1978.) DAI 39A: 5893; April 1979. [7823723]

Tests and tasks for the CLD model were developed, and findings compared with Piagetian scores. (primary)

Bagsby, Joyce Marie. The Relationship of Self Concept to Achievement of Mentally Gifted Minors in a Low Wealth Community. (United States International University, 1977.) DAI 39A: 6640; May 1979. [7909506] [grades 1-9]

Bander, Ricki Sue. The Relative Efficacy of Single and Multicomponent Treatment Approaches to Mathematics Anxiety as a Function of Mathematical Aptitude and Gender. (The Ohio State University, 1979.) DAI 40B: 1863; October 1979. [7922447]

Treatments had differing effects on anxiety; some inconsistencies were noted. (college)

Bangura, Bampia Adikalie. An Evaluation of the Mathematics Phase of the Academic Skills Enhancement Program at Louisiana State University. (The Louisiana State University and Agricultural and Mechanical College, 1978.) DAI 39A: 6494; May 1979. [7911598]

Two groups of academically disadvantaged students, differing with respect to remedial mathematics courses studied, did not differ significantly in performance in a regular college-level mathematics course. (college)

Barnes, Latha Mimbs. Mathematics Skill Test (MAST) for Chemistry as a Predictor of Success in Beginning College Chemistry for Science Majors. (Georgia State University-College of Education, 1978.) DAI 39A: 6045; April 1979. [7908500] [college]

Barnett, Charles Woodrow. Team Teaching in the Elementary School. (United States International University, 1977.) DAI 39A: 6721-6722; May 1979. [7909509] [elementary]

Baroody, Arthur James. The Relationships Among the Development of Counting, Number Conservation and Basic Arithmetic Abilities. (Cornell University, 1979.) DAI 39A: 6640; May 1979. [7910732]

A "fairly high degree of association" between counting and number conservation development was found. Meaningful counting generally was achieved earlier than conservation; addition and subtraction concepts did not seem dependent on conservation. (grade K)

Barron, Eloise Dianne Thompson. The Effects of Stressing Heuristics in Mathematical Problem Solving with In-Service Elementary School Teachers. (Georgia State University-College of Education, 1978.) DAI 39A: 6602-6603; May 1979. [7908484]

Stress on heuristics improved teachers' non-standard problem-solving ability but had no marked effect on standard problem-solving ability, course content achievement, or view of mathematics. (elementary in-service)

Bartlett, Gwendolyn Anita Gates. The Relationship of a Prekindergarten Educational Program to Selected Areas of Kindergarten Achievement. (United States International University, 1977.) DAI 39A: 6638; May 1979. [7909510] [grade K]

Bartling, John Stewart. An Investigation of the Need for Individual Performance Standards in Mastery Learning Strategies. (University of Northern Colorado, 1979.) DAI 40A: 2619; November 1979. [7925766]

No significant difference was found between groups taught with individual mastery learning standards or a group standard, although a class or instructor interaction was found. (elementary preservice)

Bartnick, Roger Wayne. A Pre-Professional Performance Based Evaluation of Selection Criteria for Admission into the Early and Middle Childhood Education Program at The Ohio State University. (The Ohio State University, 1979.) DAI 40A: 1760-1761; October 1979. [7922451] [elementary preservice]

Bassman, Emily Sue. Cognitive Processes in Imagined and Perceived Cube-Folding. (Stanford University, 1978.) DAI 39B: 4607-4608; March 1979. [7905817] [?]

Batsche, George Milton. Patterns of Psychological and Neuropsychological Measures of Performance in Inter and Intra Group Comparisons in Children with Variations in Reading and Arithmetic Achievement. (Ball State University, 1978.) DAI 40A: 746; August 1979. [7918486]

Children with different patterns of reading and arithmetic achievement were analyzed, with hemispheric, perceptual, and other factors considered. (ages 9-13)

Beal, Kenneth Maurice. A Study of Attitude and Achievement in Basic Mathematics Utilizing Individualized and Traditional Instruction at Haskell Indian Junior College. (University of Kansas, 1978.) DAI

39A: 6561; May 1979. [7910611]

Attitude and achievement were "equally as good" with either method; little gain in achievement of better mathematics skills was made. (junior college)

Beaulieu, Roderic Aldege. Patterns of Verbal Behavior in Secondary School Geometry Classes. (Columbia University Teachers College, 1979.) DAI 39A: 7202; June 1979. [7913180]

Teachers' pedagogical activities primarily consisted of structuring, soliciting, and reading; students' major activity was responding. (grade 10)

Beck, Elizabeth Anne. Selective Attention: The Influences of Subject Sex and Degree of Prior Habituation on Performance of an Attention Demanding Task with Distraction. (University of Missouri-Columbia, 1978.) DAI 40B: 484; July 1979. [7915211] [?]

Beck, John James. An Analysis of Student Attitude Toward Computer-Assisted Instruction in Nebraska Public High Schools. (The University of Nebraska-Lincoln, 1979.) DAI 40A: 3006; December 1979. [7926337] [secondary]

Bell, George Robert. A Process for Assessment of Current Programs in a Large Comprehensive High School. (Wayne State University, 1979.) DAI 40A: 1761-1762; October 1979. [7921638] [grades 6, 9, 12]

Bennett, Clarence William. An Analysis of Mathematics Education Meetings Through Classification. (Boston University School of Education, 1978.) DAI 39A: 5379; March 1979. [7905001]

Topics at NCTM conventions between 1960 and 1976 were classified and compared with emphases in published articles. (--)

Benton, Barbara Lee. Math Avoidance and Pursuit of Fantasy Careers. (Southern Illinois University at Carbondale, 1979.) DAI 40B: 2818; December 1979. [7926294]

Pursuers and rejectors differed by sex and by major, but not in attitudes toward mathematics. (college)

Berger, Florence Cohen. Sex-Differential Patterns of Verbal Interaction in Fourth, Seventh and Tenth Grade Mathematics Classrooms. (Cornell University, 1979.) DAI 40A: 3006-3007; December 1979. [7926878]

Sex of teacher did not significantly affect any of the ten verbal interaction variables. Girls received better grades with female teachers; boys, with male teachers. (grades 4, 7, 10)

Bernard, John Emil. A Theory of Mathematical Problem Solving Derived from General Theories of Directed Thinking and Problem Solving. (The University of Texas at Austin, 1978.) DAI 40A: 1322; September 1979. [7920248]

An extensive analysis is given for a set of computerized number search problems which were used in a verification study.

(elementary preservice)

Bernard, Kenneth James. Identifying the Interests in Mathematics of Adult Students in a Correctional Setting. (The University of Rochester, 1979.) DAI 40A: 1322-1323; September 1979. [7920572]

Interest in eight mathematical topics was ascertained. (community college)

Berry, Robert Irvin. Implementation of Computer Technology Within Individual School Districts and Regional Data Processing Centers. (Northern Arizona University, 1979.) DAI 40A: 1165; September 1979. [7919019] [--]

Beutler, Eugenie J. Effects of Movement, Posture, Proximity, and Touch on Student Achievement. (Rutgers University The State University of New Jersey (New Brunswick), 1979.) DAI 40A: 159-160; July 1979. [7914109]

Postural variations and tactile activity of teachers correlated positively with pupil achievement; movement and proximity were not significantly correlated. (grades 4, 6)

Bickford, Evelyn Toler. Identification of Important Factors Contributing to the Academic Achievement of the Student in the Remedial Mathematics Course in the Junior College. (Georgia State University-College of Education, 1979.) DAI 40A: 3169-3170; December 1979. [7927560]

Intelligence and problem sessions contributed significantly to achievement; socioeconomic status and homework did not. (junior college)

Blackshear, Patsy Baker. A Comparison of Peer Nomination and Teacher Nomination in the Identification of the Academically Gifted, Black, Primary Level Student. (University of Maryland, 1979.) DAI 40A: 2525; November 1979. [7925739] [primary]

Blake, John Archibald. Analyzing the Solution of Problems Involving Three-Dimensional Geometric Figures: An Exploratory Study. (The University of Tennessee, 1978.) DAI 39B: 5404; May 1979. [7911663]

Differences between 16 field-dependent and independent students were found as they attempted to solve six problems. (college freshmen)

Blevins, Sandra Lee Cowan. The Interrelationships of Parent, Teacher, and Student Attitudes Toward Mathematics and Student Achievement in Mathematics. (East Tennessee State University, 1979.) DAI 40A: 1323; September 1979. [7919993]

Significant relationships were found between students' attitudes toward mathematics and both parents' attitudes and GPA. (grade 7)

Blumberg, Larry Dean. A Comparison of Open Circuit Instructional Television with Small Class Conventional Instruction on High, Average, and Low Ability Students' Achievement in Elementary Statistics. (Kansas State University, 1978.) DAI 39A: 5379; March 1979. [7906769]

Students having television instruction did not achieve as well as those having conventional instruction. (college)

Bowie, Elin Leigh. The Utility of Piagetian Tasks for the Assessment of Arithmetic Reasoning Ability in Intellectually Gifted First and Second Grade Students. (University of Washington, 1979.) DAI 40A: 723; August 1979. [7917542]

Mental age was the best predictor of reasoning scores; only class inclusion contributed significantly after the effect of MA was removed. However, ceiling effects and reliabilities of the test and tasks were questioned. (grades 1, 2)

Bradbard, David Allen. The Young Child's Concept of Length Measurement. (University of Georgia, 1978.) DAI 39A: 4100-4101; January 1979. [7901620]

Intertask comparisons suggested a framework based on task demands and task stimuli. Ability to conserve a length relation did not seem to be acquired before ability to iterate a unit. (grades 1-3)

Brown, JoAhn (Weaver). Prescriptive Learning and Student Achievement: A Study of the Impact of Individualized Learning Program in Chicago Schools. (University of San Francisco, 1979.) DAI 40A: 2368-2369; November 1979. [7923791] [elementary]

Brustein, Susan Cohn. Learned Helplessness: Intervention Through Modeling and Generalization to an Achievement Situation. (The University of Nebraska-Lincoln, 1978.) DAI 39B: 4021-4022; February 1979. [7901923]

Training on coping strategies and problem-solving skills was found to be effective. (grade 5)

Burke, Daniel Anthony. Comparative Effects of Placement in Self-Contained or Partially Mainstreamed Programs on the Self-Concept, Attendance, and Academic Achievement of EMR High School Students. (University of Massachusetts, 1979.) DAI 40A: 191-192; July 1979. [7912669] [secondary (EMRs)]

Burrows, Enid Loretta Reeder. Applications of Algebra in College General Chemistry: A Curriculum Development. (University of New Hampshire, 1978.) DAI 40A: 2522; November 1979. [7921019] [college]

Cain, Donald Ames. An Analysis of Programs Designed to Strengthen Entering Mathematics Skills for Two Year Technical College Students in Seven Southern States. (University of South Carolina, 1978.) DAI 39A: 6002-6003; April 1979. [7907591]

Selection, instructional methods, and attrition were among the factors on which data were collected. (two-year college)

Callahan, Joseph Paul. A Factorial Study of Career Education Correlates in Selected Montana Schools. (University of Montana, 1979.) DAI 40A: 2998-2999; December 1979. [7926651] [grades 3, 5, 7, 9]

Campbell, Marlene L. Education and Mathematics in the United States 1607-1977: A Brief History. (Southern Illinois University, 1978.) DAI 39A: 6003; April 1979. [7908013]

General social and educational background for five eras is discussed, and the emergence and development of mathematics is traced. (--)

Cannella, Gaile Sloan. Relationships of Individual and Group Piagetian Tasks to Early School Achievement with Disadvantaged Learners. (University of Georgia, 1979.) DAI 40A: 1855; October 1979. [7923095] [grade 1]

Canner, Jane. Imagery and Mathematics Word-Problem Solving in Elementary School Students. (Fordham University, 1979.) DAI 40A: 1352-1353; September 1979. [7920662]

The imagery-trained groups performed significantly better than the groups having "usual" instruction. The training was particularly effective in lower grades. (grades 2-5)

Carapella, Ruth Augusta. An Ex Post Facto Analysis of Arithmetic Achievement for Elementary Pupils Eligible for Participation in a Remedial Mathematics Program. (Saint Louis University, 1979.) DAI 40A: 2522-2523; November 1979. [7923815]

No significant differences in achievement were found between students in or not in the remedial program. (grades 4-6)

Carroll, Brother Austin David. The Relation of Computer Technology to Instructional Strategies. (New York University, 1978.) DAI 39A: 4684-4685; February 1979. [7824074] [--]

Casbarro, Joseph Anthony. A Study to Determine the Predictive Validity of an Elementary Test Battery. (Syracuse University, 1978.) DAI 39A: 6084; April 1979. [7908526] [grades K-2]

Cashing, Douglas L. Transactional Gestalt as It Applies to the Teaching of College Level Mathematics. (Syracuse University, 1979.) DAI 40A: 2523; November 1979. [7925555]

The Gestalt model was found to be at least as effective as the lecture/discussion model in terms of students' attitudes and knowledge of course content, and more effective in terms of involvement, social interaction, and problem-solving ability. (college)

Chan, Tak Cheung. The Impact of School Building Age on the Academic Achievement of Eighth Grade Pupils from the Public Schools in the State of Georgia. (University of Georgia, 1979.) DAI 40A: 1768; October 1979. [7923098] [grade 8]

Chang, Lisa Li-Tze. An Examination into the Effects of Calculator-Assisted Instruction on the Mathematics Achievement and Attitude of Seventh and Eighth Grade Disadvantaged Students. (Cornell University, 1979.) DAI 40A: 1323-1324; September 1979. [7920254]

On problem solving, the calculator group achieved significantly higher than the non-calculator group. No differences were found on

computation, concepts, or attitudes. (grades 7, 8)

Chanick, Marion Arlene. The Effects of Individually Guided Education on Elementary Students. (University of Northern Colorado, 1979.) DAI 40A: 2465; November 1979. [7925769] [grades 3-5]

Channell, Dwayne Eugene. A Comparative Study of Two Forms of Response Validation in the Learning of Basic Multiplication Facts by Third Grade Children. (The Ohio State University, 1979.) DAI 40A: 1930-1931; October 1979. [7922466]

No achievement difference was found between groups using pictured arrays or calculators to validate responses to multiplication facts; both groups made significant gains. (grade 3)

Chase, Gene Barry. An Information-Processing Model for Mathematics Education. (Cornell University, 1979.) DAI 40A: 3082; December 1979. [7926883]

The model is shown to account for the increased ability to program computers when flow-charting is provided, as well as for other abilities. (college)

Chen, Chun Yat. The Acquisition of Metric System Concepts by Engineering Graphics Students. (Texas A&M University, 1978.) DAI 39A: 5989-5990; April 1979. [7909186] [college]

Cheser, David Wayne. Effects of Age, Sex, and Cultural Habitat on Development of Piagetian Spatial Concepts Among Rural and Urban Children from Togo, West Africa. (George Peabody College for Teachers, 1978.) DAI 39A: 6644-6645; May 1979. [7909935] [ages 5-13]

Chiaramonte, John Anthony. An Experimental Study to Determine the Comparative Effects of the Contract Method of Teaching and the Traditional Lecture Method of Teaching upon Achievement in an Elementary Mathematics Course, and Attitude Towards Mathematics. (New York University, 1979.) DAI 40A: 2523-2524; November 1979. [7925260]

No significant differences in achievement or attitude were found between groups having the contract method or lectures. (community college)

Childs, John Hansen. Television Viewing, Achievement, IQ, and Creativity. (Brigham Young University, 1978.) DAI 39A: 6531; May 1979. [7911886] [grades 2, 6]

Christensen, Judith Carol. Wisconsin Elementary School Teachers' Perceptions About Their Professional Development. (Northern Illinois University, 1979.) DAI 40A: 2442; November 1979. [7924371] [elementary teachers]

Christiana, Robert Duwain. The Effect of a Pre-Kindergarten Program on Student Achievement. (Columbia University Teachers College, 1979.) DAI 40A: 1954; October 1979. [7923575] [grades 3, 4]

Cicchelli, Theresa. The Effects of Two Instructional Patterns and Prior Mathematics Achievement on Post Course Achievement. (Syracuse University, 1979.) DAI 40A: 2601-2602; November 1979. [7925560]

No significant difference in achievement was found between groups having direct or non-direct instruction. Prior achievement of males, but not females, had a significant effect on post-course achievement. (grade 5)

Clark, Margaret Mary. An Examination of Metric Performance and Learner Aptitudes of Elementary Pre-Service Teachers Using Computer-Assisted Instruction. (Indiana University, 1978.) DAI 39A: 6026-6027; April 1979. [7905966]

No significant difference in achievement was found between groups using PLATO or studying individually. Aptitudes did not account for significant variance in performance. (elementary preservice)

Clarkson, Sandra Pryor. A Study of the Relationships Among Translation Skills and Problem-Solving Abilities. (University of Georgia, 1978.) DAI 39A: 4101; January 1979. [7901629]

Six translation factors were identified; a significant difference was found between the means of three problem-solving ability groups. (grade 9)

Clinefelter, David Lee. Analysis of the Interaction Between Students, Teachers, and Materials in Intermediate Grade Mathematics Classes. (The Ohio State University, 1978.) DAI 39A: 4685; February 1979. [7902097]

The ACCS model, a system for classifying students and curriculum materials, was used in this study of classroom behaviors and teaching effectiveness. (grades 3, 4)

Cole, Mary Catherine David. The Effects of Individualized Mathematics Instruction on the Mathematical Achievement of Third Grade Children. (Mississippi State University, 1979.) DAI 40A: 3170; December 1979. [7927083]

On one of two tests, the individualized approach was significantly better than the traditional approach. (grade 3)

Cole, Shirley Ann. Teacher Behaviors Associated with Mathematics Achievement in Third Grade Students. (The University of Arizona, 1978.) DAI 39A: 4134; January 1979. [7901712]

Relationships between teacher behaviors and student achievement were identified in classrooms. The strongest finding was that higher rates of praise result in higher achievement. (grade 3)

Collins, Donald Arthur. A Study of the Factors Influencing Cognitive Development, Physics Achievement, and the Quality of Learning in a Self-Paced, Individualized High School Physics Program Which Utilizes Concrete and Formal Instructional Procedures. (The University of Michigan, 1978.) DAI 39A: 6045-6046; April 1979. [7907049] [grades 10-12]

Cormier, Warren George. Relationship Between Self-Concept Inconsistency and Academic Achievement of High School Students. (United States International University, 1977.) DAI 39B: 5514; May 1979. [7909532] [grades 11, 12]

Crockett, Rena Vay. An Assessment of the Secondary Science and Mathematics Curricula in Selected Rural East Tennessee Counties. (The University of Tennessee, 1978.) DAI 39A: 6498; May 1979. [7911673]

Educators, parents, and students agreed strongly on educational expectations, but differed in their perceptions of how well curricula met the expectations. (secondary)

Crowston, Lloyd Elmo. The Development of a Mathematics Learning Laboratory and Tracking System to be Used with Continuing Education Students at North Seattle Community College. (Seattle University, 1979.) DAI 40A: 2524; November 1979. [7925423]

Components of the laboratory model are identified, with the design and implementation discussed. (community college)

Cunningham, Mary Bender. The Effects of the Previous Study of Algebra and Two Methods of Instruction on Attrition in a Community College Developmental Algebra Course. (The University of Tennessee, 1978.) DAI 39A: 4686-4687; February 1979. [7903412]

Attrition was significantly lower in lecture sessions, in variable registration groups, and for those who had algebra in high school. (community college)

Darer, Evelyn. The Relationship Between the Degree of Openness in Classroom Organization and Selected Aspects of Cognitive Achievement. (New York University, 1978.) DAI 39A: 4714-4715; February 1979. [7824081] [grades 2-5]

Davis, Cynthia Lea. The Interaction of Learning and Instructional Styles as Related to Developmental Studies Student Achievement. (The Florida State University, 1979.) DAI 40A: 3252; December 1979. [7926736] [college]

Davis, Robert Marshall, Jr. An Analysis of Three Selected Mental Maturity Measures in Predicting Academic Achievement of Students for Educational Decision Makers. (East Tennessee State University, 1978.) DAI 39A: 5833; April 1979. [7907823]

The three IQ tests differed in their ability to predict mathematics achievement, with the WISC-R correlating highest. (grades 1-12)

Deal, Thomas Connolly. A Study of Withdrawals of Mathematics Students at Indian River Community College. (Florida Atlantic University, 1978.) DAI 39A: 6421-6422; May 1979. [7909466]

Students who withdrew from selected mathematics courses differed significantly in prerequisite skills from students who completed the courses. (community college)

DeBlassio, John Kanton. Student Characteristics Associated with

Attitudes Toward Using a Computer in Selected High School Mathematics Courses. (University of Pittsburgh, 1978.) DAI 40A: 723; August 1979. [7917417]

Attitudes of students who liked using computers were significantly correlated with such factors as high achievement in mathematics and above average liking for original problems. (secondary)

DeComo, Michael James, Jr. A Study of the Academic Achievement of Gifted Students in a Special Program. (Kent State University, 1978.) DAI 39A: 7280; June 1979. [7912510] [grades 6, 7]

DeVivo, Earleen Haney. Student, Parent and Student-Parent Counseling Effects on Work Output and Achievement of Seventh Grade Mathematics Students. (University of California, Los Angeles, 1978.) DAI 39A: 5946-5947; April 1979. [7907648]

A parent-student counseling program was successful in promoting a significant increase in work output and improved test grades. (grade 7)

Dickson, Neil S. Student Attitude Towards Mathematics: A Study Concerning Teacher Influence and Subject Content. (Brigham Young University, 1978.) DAI 39A: 4102; January 1979. [7901586]

For students with poor attitudes, teacher influence and subject content did not have different effects, while students with good attitudes had significantly different scores. Interactions between grade and sex, and schools and sex, were found. (grades K-12 ?)

Dittmer, Robert Michael. The Effects of Various Levels of Teacher/Student Verbal Interaction on Geometry Students. (University of Missouri-Columbia, 1978.) DAI 39A: 6003; April 1979. [7906868]

Increased ratios of student talk compared to teacher talk resulted in better achievement and attitudes. (grade 10)

Dobelstein, Russell Harold. Supplementary Materials and Activities, Their Effects on Attitudes and Achievement in First Year Algebra. (The University of Connecticut, 1978.) DAI 39A: 6603; May 1979. [7911360]

No significant difference in attitude or achievement was found between classes using or not using supplementary materials and activities. (grade 9)

Donlan, Herbert Kenny. Profile of School Management Measures and Their Relation to Student Achievement Gains. (New York University, 1979.) DAI 40A: 1171-1172; September 1979. [7918840] [grade 6]

Donnellon, Miriam Anne. Procedures to Establish Criteria for Minimal Competency in Consumer Mathematics. (University of Pittsburgh, 1978.) DAI 39A: 4789-4790; February 1979. [7902693]

Minimal computation skills were listed and validated by teachers and community business persons. (secondary)

Dowling, Delia Mary. The Development of a Mathematics Confidence

Scale and Its Application in the Study of Confidence in Women College Students. (The Ohio State University, 1978.) DAI 39A: 4790; February 1979. [7902111]

Factors related to confidence level, including sex, mathematical background, and type of problem, were considered. (college)

Dozier, John Lee. A Study of the Relationships Among Teacher Expectancy, Students' Perceptions of Teacher Non-Verbal Behavior, and Students' Performance in and Attitudes Toward Mathematics. (University of Houston, 1978.) DAI 39A: 4102; January 1979. [7901201]

Teacher expectancy seemed to contain virtually no predictive information relative to students' perceptions of a teacher's non-verbal behavior, but did tend to predict students' performance and attitudes. (grades 6-8)

Drayton, Mary Ann Chatfield. A Bayesian Meta-Analytic Demonstration: Mathematics Achievement in Seventh and Eighth Grade. (Northern Illinois University, 1978.) DAI 39A: 4791; February 1979. [7902444]

Meta-analysis indicated that the odds favor an individualized instruction group gaining a quarter-year's advantage in achievement over a traditional instruction group. (grades 7, 8)

Durapau, Victor Joseph, Jr. Interaction of General Reasoning Ability and Gestalt and Analytic Strategies of Processing Spatial Tasks with Transformational and Nontransformational Treatments in Secondary School Geometry. (The University of Texas at Austin, 1979.) DAI 40A: 1324; September 1979. [7920107]

Three significant aptitude-by-treatment interactions were found on transfer measures. (grade 10)

Durgin, Max Weldon. The Effects of Teaching Beginning College Mathematics with a Business Emphasis by Computer Aided Instruction. (University of South Dakota, 1977.) DAI 39A: 5380; March 1979. [7904951]

Students learned as well using CAI with interactive or batch processing as they did using traditional drill-and-practice methods. (college freshmen)

Ebmeier, Howard Henry. An Investigation of the Interactive Effects Among Student Types, Teacher Types, and Treatment Types on the Mathematics Achievement of Fourth Grade Students. (University of Missouri-Columbia, 1978.) DAI 39A: 5932-5933; April 1979. [7906869]

The direct instructional method was effective for most students. Differences for some students and teachers were noted. (grade 4)

Echeverri Dávila, Hernado José. The Calculus of Variations and the Principle of Least Action Before LaGrange: Jakob and Johann Bernoulli, Euler, Maupertuis. (Columbia University, 1978.) DAI 39A: 5380-5381; March 1979. [7904073]

This material was prepared for an undergraduate course in the history of mathematics. (college)

Economopoulos, Marjorie Potter. A Study Interrelating Decision Theory, Situational Problem Solving, and Divergent Thinking Among Gifted Secondary Mathematics Students. (Georgia State University-College of Education, 1978.) DAI 39A: 4102-4103; January 1979. [7900120]

Game theory and decision theory units were equally effective in imparting heuristics skills to students. (secondary)

Edwards, Nancy Tanner. The Relationship of Cognitive Style and Mathematical Reasoning Ability of Children. (University of Missouri-Kansas City, 1979.) DAI 40A: 3170-3171; December 1979. [7926589]

Cognitive style preferences and capabilities of children from the U.S. and seven other countries were compared. (ages 6, 8, 10)

Egolf, Kenneth Lee. The Effects of Two Modes of Instruction on Students' Abilities to Solve Quantitative Word Problems in Science. (University of Maryland, 1978.) DAI 40A: 778-779; August 1979. [7917125]

Use of Polya's process or algebraic algorithm on density problems produced no differences in achievement. (grades 7, 8)

Eisert, Debra Claire. Hemispheric Functioning: A Comparison of the Verbal/Visuospatial and Analytic/Holistic Dichotomies. (The University of Nebraska-Lincoln, 1978.) DAI 39B: 3574-3575; January 1979. [7900307]

Mathematics education students took longer to respond to verbal-analytic and visuospatial-analytic stimuli; students from mathematics courses for engineers were also slower on verbal analytic stimuli in the left hemisphere. (college)

Elrod, Janelle Abercrombie. A Study of Teachers' Frequency of Oral Expressions of Logic and Critical Thinking Ability and Their Relationship to Students' Geometry Achievement and Critical Thinking Ability. (Auburn University, 1979.) DAI 39A: 7202; June 1979. [7913693]

High positive relationships were found between students' critical thinking ability and geometry achievement, but not between students' and teachers' scores. (grade 10)

Emery, Anne Osborn. The Effectiveness of a Career Exploration Program in Meeting the Attendance, Punctuality, and the Academic Achievement Objectives of an Urban High School. (Temple University, 1978.) DAI 39A: 6679; May 1979. [7909993] [grade 12]

Engelmeyer, William James. The Effectiveness of Hand-Held Calculators for the Remediation of Basic Multiplication Facts. (University of Maryland, 1978.) DAI 39A: 5381; March 1979. [7906654]

Students using calculators to verify their answers achieved as well as students receiving verification from a teacher. (grade 7)

Erwin, Eugene Chester. A Study of Self-Esteem Measures and Other Factors That Are Used for Placement Purposes as They Are Related to Teacher Marks in Freshman Mathematics Classes. (Northern Illinois University, 1978.) DAI 39A: 7202-7203; June 1979. [7912481]

Students who had different teachers in a ninth-grade mathematics course did not differ in self-esteem measures, but differences in esteem were related to high and low marks. (grade 9)

Evans, Nelson Edward. Competitiveness, Cooperativeness, and Assigning Grades in the High School Classroom. (Andrews University, 1978.) DAI 39A: 7238; June 1979. [7912436]

Cooperatively oriented male teachers accounted for a significant portion of the variance in grades; highest grades went to cooperatively oriented female students and lowest grades to competitively oriented male students. (secondary)

Federinko, Richard Joseph. A Study of the Relationship Between Selected Academic Variables and Performance on the State Board Test Pool Examination for Graduates of an Associate of Science Degree Nursing Program at Troy State University in Montgomery. (The Florida State University, 1979.) DAI 40A: 3140; December 1979. [7926744] [college]

Feibel, Werner Martin. Effects of Training on the Transition from Concrete to Formal Reasoning in College Students. (University of California, Santa Cruz, 1978.) DAI 39B: 3547-3548; January 1979. [7900822] [college]

Fesharaki, Mohammad. A Study of the Effect of Hand-Held Calculators on Achievement, Estimation and Retention of Seventh and Eighth Graders on Decimals and Percent. (University of Missouri-Columbia, 1978.) DAI 39A: 6004; April 1979. [7906872]

The calculator method was more effective than the traditional method on measures of achievement and estimation; no difference was found on retention tests. (grades 7, 8)

Ford, Sondra Sue. The Relationship of Self-Actualization to Measures of Academic Success. (George Peabody College for Teachers, 1978.) DAI 39A: 6500; May 1979. [7909930]

Data for both education majors and graduate students (in counselor education) indicated that mathematical ability and self-actualizing growth are closely related. (college)

Frank, Barbara Beth. An Investigation of the Relationship Between Visual-Spatial Ability and Achievement in Mathematics in Normal and Learning Disabled Children. (Columbia University Teachers College, 1979.) DAI 40A: 1999-2000; October 1979. [7923586]

Visual-perceptual ability was a "probable good" predictor of mathematical achievement. (grades 4-6)

French, Yvonne Marie. A Study of the Relationships Between Student Achievement and Student Perception of Teacher Effectiveness. (The Louisiana State University and Agricultural and Mechanical College,

1979.) DAI 40A: 3016; December 1979. [7927525]

Students' perceptions of teacher effectiveness were positively correlated with achievement in grade 8, and negatively correlated in grades 11 and 12. (grades 7-12)

Friedman, Barry Charles. Didactic Vs. Discovery Learning in Hyperactive and Non-Hyperactive Learning Disabled Children. (New York University, 1979.) DAI 40A: 1402-1403; September 1979. [7918843] [elementary]

Fugate, Barbara Riley. An Assessment of Attitudes, Self-Concept, and Mathematical Achievement Resulting from the Use of Minicalculators. (North Texas State University, 1978.) DAI 39A: 6531-6532; May 1979. [7911068]

No significant difference in achievement, attitude, or self-concept was found between groups using or not using calculators. (grades 4, 5)

Furr, Jane Dellana. The Relationship Between High School Reading and Math Achievement Levels and Later Life Experiences: Implications for Minimal Competency Testing. (The University of North Carolina at Chapel Hill, 1978.) DAI 40A: 751; August 1979. [7914348]

Little relationship was found between achievement levels and experiences of below-average graduates. (adults)

Gallagher, John Patrick. The Effectiveness of Mixed-Initiative Instructional Components in an Artifically Intelligent CAI System for Teaching Attribute Blocks Problem Solving Skills. (University of California, Santa Barbara, 1978.) DAI 39A: 6501; May 1979. [7911651]

Students receiving computerized tutorial instruction performed less well on a transfer problem than did students receiving no tutorial instruction. (college ?)

Gallegos, Tony Alfredo. A Methods Course for the Bilingual Elementary School Mathematics Teacher. (University of Northern Colorado, 1978.) DAI 39A: 6603-6604; May 1979. [7910294]

Vocabulary, rationales, content, and use of materials were among the topics considered in the course. (elementary in-service)

Gaskill, James Leslie. The Emotional Block in Mathematics: A Multivariate Study. (The University of British Columbia (Canada), 1979.) DAI 40A: 1931; October 1979.

Self-concept alone explained approximately 20 per cent of the computation achievement variance. Mathematical anxiety and motivation were also correlated, but at lower levels. (grade 6)

Gavette, James Orin. The Effects of Tune/Focus Versus Traditional Forms of Video Replay on the Teaching Performance of Elementary Mathematics Methods Students. (Southern Illinois University at Carbondale, 1979.) DAI 40A: 3239; December 1979. [7926307]

Both tune/focus and traditional replay were found to be effective

with or without supervisor-assisted evaluation. (elementary preservice)

Gerfin, Michael Gary. Early Presentation of Mathematical Applications and the Achievement of Second Year Algebra Pupils. (Temple University, 1978.) DAI 39A: 6501; May 1979. [7909997]

The use of applications had no effect on immediate or delayed recall. (grade 11)

Gibbs, Shirley Anne Osborne. Instructing Dietitians in the Metric System of Measurement. (Oklahoma State University, 1978.) DAI 39A: 4774-4775; February 1979. [7903667] [adults]

Giffune, Magdalene Pontolillo. The Effect of Inservice Training in Reading upon Students' Ability to Solve Verbal Problems in Mathematics. (Boston University School of Education, 1979.) DAI 40A: 2572; November 1979. [7923863]

The teaching of reading strategies significantly affected student ability to write correct equations and obtain correct solutions for problems. (teachers in grade 9)

Gilmer, Gloria Ford. Effects of Small Discussion Groups on Self-Paced Instruction in a Developmental Algebra Course. (Marquette University, 1978.) DAI 39A: 5290; March 1979. [7905173]

No significant differences in achievement, intellectual involvement, or withdrawal were found between students working in discussion groups or alone. Interest, attitude, and pacing were affected, however. (two-year college)

Gingold, Merri Saltzman. The Psychological Foundations of Mathematics Education: Survey and Analysis. (Temple University, 1978.) DAI 39A: 6604; May 1979. [7909998]

Teachers indicated they were influenced by cognitive psychological foundations in their classroom teaching. The most commonly named goal was developing computational skills as opposed to developing thinking and concepts. Flashcards, workbooks, and programmed texts were used more than concrete materials. (elementary teachers)

Glascock, Jane. A Visual Information Processing Approach to Sex Differences in Spatial Ability. (University of Washington, 1979.) DAI 40B: 2874; December 1979. [7927793] [?]

Gleason, Bruce Michael. The Use of Technical Teaching Skills by University of Florida Secondary School Student Teachers: A Survey. (The University of Florida, 1978.) DAI 39A: 7131-7132; June 1979. [7913277]

Findings were compared for student teachers in social studies, language arts, and mathematics. (secondary preservice)

Glenn, Herman. An Investigation of Factors Related to Academic Underachievement Among Sixth Grade Pupils. (United States International University, 1977.) DAI 39A: 6651; May 1979. [7909550]

Steady gains in mathematics achievement on state assessment and standardized tests were found. (grade 6)

Gold, Allan Philip. Cumulative Learning Versus Cognitive Development: A Comparison of Two Different Theoretical Bases for Planning Remedial Instruction in Arithmetic. (University of California, Berkeley, 1978.) DAI 40A: 164-165; July 1979. [7914614]

One hour of training resulted in few differences between groups. (grades K-2, 4-7)

Grahs, Carl Edward. Bilateral Alpha Activity as a Function of Hypnosis, Math and Spatial Mental Tasks and a Part-Whole Tactile Matching Task. (University of Northern Colorado, 1978.) DAI 39A: 4820-4821; February 1979. [7902824] [adults]

Grant, Owilender Kennedy. The Best Linear Approximation of Polynomial Functions: An Approach to the Teaching of Calculus. (University of South Carolina, 1978.) DAI 39A: 6604-6605; May 1979. [7911832]

Students taught by the approximation approach achieved higher scores than those having a traditional approach. (college)

Gray, James Braden. The Effects of Teacher Structure on Disadvantaged Preschool Children. (The University of Alabama, 1978.) DAI 40A: 158; July 1979. [7915026] [grade K]

Green, Michael. The Development and Utilization of a Measurement Test for Intermediate Grades. (The University of Wisconsin-Madison, 1978.) DAI 40A: 1325; September 1979. [7915098]

Face validity of the test was determined, and use with pupils indicated a grade effect, a tendency for DMP pupils to score higher, and a difficulty level for each attribute. (grades 4, 5)

Greenwald, David Galt. Playing Cardgames for Early Mathematical Learning. (Claremont Graduate School, 1979.) DAI 40A: 1931-1932; October 1979. [7922016]

The general concept of play, background on cognition, and the evolution of card games are discussed, with 11 "Treffles" games presented. (elementary)

Gressett, Wayne Monroe. Conservation of Discontinuous Quantity with Familiar and Unfamiliar Stimulus Materials. (Mississippi State University, 1978.) DAI 39A: 4139; January 1979. [7900148] [ages 5-8]

Grossi, Lea Trinka. The Organization of Euclidean Geometry and Spatial Imagery Abilities in Familially Retarded and Nonretarded Children. (Boston University Graduate School, 1979.) DAI 40B: 2334-2335; November 1979. [7923932]

The sequence in which geometric operations appeared to emerge in retarded children was different than that for non-retarded children. (ages 7-11)

Guillory, Barbara Lee. The Efficacy of Language Instruction on Reading and Mathematics Achievement of Educationally Deprived Children. (The American University, 1979.) DAI 40A: 791; August 1979. [7917525] [grade 1]

Gulliver, Markita Louise Price. The Effect of the Spatial Visualization Factor on Achievement in Operations with Fractions. (University of Minnesota, 1978.) DAI 39A: 5381-5382; March 1979. [7906321]

No interaction was found between high and low visualization levels and type of fraction model (geometric or non-geometric) or mode of teaching fractions (pictorial or concrete). (grade 4)

Haran, Elizabeth Marie. A Study of Adolescent Health Status and Its Relationship to Academic Achievement. (Boston College, 1979.) DAI 40A: 1293-1294; September 1979. [7920462] [secondary]

Harbor-Ibeaja, Violet Fine Nwefere. Acquisition of Harmful Einstellungs in Arithmetic Instruction. (The Florida State University, 1979.) DAI 40A: 3171; December 1979. [7926757]

Students were susceptible to "arithmetic Einstellungs": wrong, inefficient, or no response to tasks. (grades 6, 8)

Hardeman, Carole Hall. The Effects on Middle School Students of "MATHCO": A Program to Enhance Young Women's Understanding of Interdisciplinary Uses of Math in Career Choices. (The University of Oklahoma, 1979.) DAI 40A: 1932; October 1979. [7921236]

Students' attitudes toward mathematics-related careers were changed by use of the materials. (grade 7)

Harris, Carolyn Harriet Hines. A Study of the Effects of Using Manipulatives in Teaching a Unit on Ratio and Proportion to Freshmen in Compensatory Course. (Columbia University Teachers College, 1979.) DAI 40A: 1932-1933; October 1979. [7923595]

No significant differences were found between groups using a programmed workbook with or without manipulatives. (college freshmen)

Harris, Dorothy Lee Brown. The Relationship of School Behavior and Family Background to Academic Achievement. (United States International University, 1977.) DAI 39A: 5819-5820; April 1979. [7908421] [grade 3]

Hartshorn, Nancy Gilbert. A Comparison of Mathematics Achievement of Students Using IMS and Students Using a Textbook Approach in the Sioux City Public Schools. (University of South Dakota, 1977.) DAI 39A: 5934; April 1979. [7904937]

The group using a textbook achieved significantly better on computation than the group using the individualized program; no differences for concepts and applications were found. (grades 4-6)

Hawkins, Mary Stephanie Brown. A Study of the Effects of Feedback on the Relationship Between Anxiety and Mathematical Performance of Seventh and Eighth Grade Students. (University of Houston, 1979.)

DAI 40A: 1933; October 1979. [7919380]

Achievement increased when students were given corrected answers on pretests. (grades 7, 8)

Hector, Judith Ellen. The Effects of Calculator Versus Conventional Algorithms for Fractions on Community College Student Computation, Understanding, and Attitude Scores. (The University of Tennessee, 1978.) DAI 39A: 6605; May 1979. [7911679]

No significant differences in fraction computation, understanding, or attitudes were found between groups using a conventional algorithm set with or without calculators, or a calculator-based algorithm set. (community college)

Heffernan, John Timothy. An Investigation into the Relationship Between Student Achievement in an Introductory College Statistics Course, Employing a Simulated S.M.S.A. Census Data Base, and Selected Student Characteristics. (Clark University, 1979.) DAI 39A: 7436-7437; June 1979. [7911952] [college]

Heidrich, Arnost. Some Contributions to the Psychology of Proof Construction in Higher Mathematics. (University of Maryland, 1978.) DAI 40A: 1325-1326; September 1979. [7920734]

Interviews with 40 undergraduate and graduate students were reported with perceptions of how they thought of mathematics. (college)

Heitgerd, Helen Anita. Teacher and Student Characteristics as Determined by Pace in an Elementary School Mathematics Program. (University of Missouri-Columbia, 1978.) DAI 39A: 6004-6005; April 1979. [7906885]

Both teacher and student characteristics determined pace. Teachers who taught a single group obtained better results than those teaching two or more groups. (grade 4)

Heller, Kirby Ann. Experiences for Success in Mathematics: The Effects of Students' Attributions, Teachers' Expectancies, and Teacher-Student Interactions. (The University of Michigan, 1978.) DAI 39B: 5136; April 1979. [7907092]

Differences were found in the expectancies and perceptions of boys and girls. No sex differences were found in teachers' expectancies. (grades 7, 9)

Hendrickson, Joe David. The Use of Learner Outcomes in Assessing a Teacher Education Program in the Area of Acoustically Handicapped. (University of Northern Colorado, 1978.) DAI 39A: 4880; February 1979. [7902828] [preservice]

Hepp, Donald Andrew. The Effects of a Gifted Mathematics Program on the Attitudes and Achievement of Secondary School Students Identified as Academically Gifted. (University of Pittsburgh, 1978.) DAI 40A: 1326; September 1979. [7917425]

Gains for gifted students were significantly higher than gains of a

comparison group having some gifted students. (grades 7-12)

Hess, Charlotte Mae. Three Methods of Teaching Metric Measurement and Their Cognitive and Affective Effects on Preservice Elementary Teachers. (The Pennsylvania State University, 1978.) DAI 39A: 4881; February 1979. [7902609]

Expository, modular, and gaming approaches were each effective in changing metric knowledge and attitude. (elementary preservice)

Hicks, James Lokay. An Evaluation of a Graphical Construction Technique, Designed for Secondary School Students with a Limited Background in Mathematics, for Solving Problems in PSSC Physics. (Northwestern University, 1978.) DAI 39A: 6046; April 1979. [7907884] [grade 11]

Hildebrand, Patricia J. Relations Between Family Environment and First Grade Math Achievement: An Exploratory Study Using Prediction Analysis. (University of Pennsylvania, 1978.) DAI 39A: 6005; April 1979. [7908747]

Attitudes and workshop attendance of parents were considered in relation to pupil achievement. (grade 1)

Hirsch, Lewis Robert. The Efficacy of Self-Instructional Training as a Procedure to Modify Students' "Confidence" and Performance in Mathematics. (The Pennsylvania State University, 1978.) DAI 39A: 4823; February 1979. [7902610]

Self-instructional training was no more effective than small-group discussions in modifying confidence and performance scores. (college freshmen)

Hirstein, James Jay. Children's Counting in Addition, Subtraction, and Numeration Contexts. (University of Georgia, 1978.) DAI 39A: 7203; June 1979. [7914032]

Level of quantification has a significant effect on performance in grades 1 and 2. "Extensive quantifiers" used rational counting strategies as a base for addition and subtraction concepts. (grades 1, 2)

Holland, Donald Wayne. An Investigation of the Generality of Teacher Clarity. (Memphis State University, 1979.) DAI 40A: 1244; September 1979. [7919870] [secondary]

Holmes, Dennis Howard. The Effects on Pupil Achievement and Attitude of Using a Criterion-Referenced Evaluation and Pupil Monitoring System in General Mathematics. (University of Southern California, 1978.) DAI 39A: 4197-4198; January 1979. [--]

No significant difference in achievement or attitude was found between groups having criterion-referenced or "usual" evaluation. (grade 9)

Holz, Jane M. An Investigation of the Effects of Time on Task, Prior Performance, and Sequencing on the Attainment of Mastery in a Computer-Controlled Mastery Learning Model in Basic Mathematics.

(The Pennsylvania State University, 1978.) DAI 39A: 6005-6006; April 1979. [7909080]

Time on task was not correlated with achievement, but practice scores were correlated with test scores. It appeared that algorithmic development could be interrupted without impairment. (secondary)

Horak, Willard Gene. The Effects of Locus of Control and Two Types of Classroom Climate on Student Academic Achievement and Self-Concept. (Drake University, 1978.) DAI 39A: 7134-7135; June 1979. [7912597]

Individual means on mathematics tests were higher for the student with an internal locus of control and for the non-open classroom environment. (grade 6)

Horner, Donald M. A Canonical Analysis of a Criterion-Referenced Test and a Norm-Referenced Test in Mathematics. (Northern Arizona University, 1978.) DAI 39A: 4198; January 1979. [7824577]

A significant relationship was found between variables of the two tests. (grade 4)

Horst, Marilyn Rae. A Study of the Concurrent and Predictive Validity of the Fort Worth Preschool Screening Instrument. (University of South Dakota, 1977.) DAI 39A: 5400; March 1979. [7904947] [grades K, 2]

Hu, Jing-Mei May. Comparison of Numbers and Numerosity: A Developmental Study of Psychophysical Judgments. (The University of Iowa, 1978.) DAI 39B: 6153-6154; June 1979. [7912859] [grades K, 2, adult]

Huff, Gene Edward. An Investigation into the Relationship of Recorded Information on Selected Eighth Grade Students and Their Performance on the Basic Essential Skills Test. (University of Missouri-Columbia, 1978.) DAI 40A: 49-50; July 1979. [7915250] [grade 8]

Hume, David. A Scale to Measure Attitude Toward One's Mathematics Teacher. (The University of Tennessee, 1979.) DAI 40A: 3171; December 1979. [7927036]

Test-retest reliability for the scale was found to be .93. (college)

Hunt, Martha Louise. An Investigation of the Interactions of Student Ability Profiles and Instruction in Heuristic Strategies with Problem Solving Performance and Problem Sorting Schemes. (University of New Hampshire, 1978.) DAI 39B: 3363-3364; January 1979. [7824549]

It was concluded that heuristic instruction may be more beneficial for certain ability types. (college freshmen)

Hussein, Hussein Gharib. A Comparison of the Cognitive Levels of Gifted and Other Students' Responses in Classroom Interaction in Secondary School Mathematics Classes. (University of Pittsburgh,

1978.) DAI 39A: 5904-5905; April 1979. [7902701]

Gifted students made more verbal cognitive responses, and more at higher levels, than did other students. (grades 9-11)

Ibarra, Cheryl Gibbons. An Investigation of Children's Ability to Solve Simple Addition and Subtraction Story Problems Prior to Formal Arithmetic Instruction. (University of Pittsburgh, 1979.) DAI 40A: 2524; November 1979. [7924719]

The degree of concreteness and problem complexity significantly affected achievement. (grade K)

Ibrahim, Fawzy Taha. An Investigation of Selected Procedures for Determining Proper Entry Levels in a Hierarchically Structured, Computer-Controlled Course in Basic Mathematics Modeled on the Principles of Mastery Learning. (The Pennsylvania State University, 1978.) DAI 39A: 5905; April 1979. [7909084]

No significant differences were found in the performance of students who entered the course at different points. (junior high)

Indelicato, Arthur Jasper. A Study of the Effects of Multiple-Embodiments in the Teaching of Selected Mathematical Concepts to Seventh Grade Students. (University of Minnesota, 1979.) DAI 40A: 3171-3172; December 1979. [7926135]

Significant differences were found for some classes on portions of the four units. (grade 7)

Ingram, John Earl, Jr. The Relationship Between School-Community Relations and Student Achievement. (The University of Wisconsin-Madison, 1978.) DAI 39A: 5842; April 1979. [7823737] [parents in grades 4-6]

Jackson, Herman E. A Comparison of the Effectiveness of Three Instructional Formats in Introductory Calculus on Student Achievement and Attrition. (The University of Tennessee, 1978.) DAI 39A: 6606; May 1979. [7911687]

Students having the self-paced competency format achieved significantly higher scores on the final examination than those having large lecture recitations or conventional lectures. Data on attrition were inconclusive. (college)

Jackson, Morris Lee. The Relationship Between Self-Concept and Academic Achievement Among College Women. (The George Washington University, 1979.) DAI 40A: 1282-1283; September 1979. [7921009] [college]

Janowitz, Karl Philip. The Relationships Among Algorithmic Skills, Concrete Operational Tasks, and Formal Operational Logic in Black Urban High School Students. (Temple University, 1979.) DAI 39A: 6697; May 1979. [7910004]

The correlation between algorithmic tasks and conservation tasks was low. Few students were at the formal operations stage. (secondary)

Jevell, Wallace Fred, Jr. Hand Calculators in Secondary Education: Evaluation, Analysis and Direction. (State University of New York at Buffalo, 1979.) DAI 40A: 724; August 1979. [7918763]

Approximately half of the content of algebra, geometry, and elementary functions textbooks and one-eighth of the algebra-trigonometry textbook could be appropriate for meaningful calculator application. (secondary)

Johanson, Roger Phillip. Curricular Content in Geometry: Formal and Informal Meanings. (Cornell University, 1979.) DAI 40A: 1244; September 1979. [7920258]

The nature of formal and informal meanings was analyzed; students profited slightly more from a formal-informal sequence than the reverse (in a two-lesson treatment). (college)

Johnson, Helen Marie Watt. Do Principals Make a Difference? The Relationship Between Principal-Related Variables and Student Outcomes in IGE Schools. (The University of Wisconsin-Madison, 1978.) DAI 40A: 1270-1271; September 1979. [7916555] [elementary]

Johnson, Judith Ann. Learning in Peer Tutoring Interactions: The Influence of Status, Role Change, Time-On-Task, Feedback, and Verbalization. (University of California, Los Angeles, 1978.) DAI 39A: 5469-5470; March 1979. [7906175] [grade 7]

Johnson, Judith Jo-Anne. A Paradigm of a Multi-Level Choice Test. (Indiana University, 1978.) DAI 39A: 5464; March 1979. [7906252]

The test, consisting of arithmetic terms as item stems and options at "concrete" and "abstract" levels, had a split-half reliability of .70. (elementary)

Johnson, Mary Hill. A Comparative Study of Teacher Effectiveness and Student Achievement of Target Teachers and Students of the Response to Educational Needs Project and Non Target Teachers and Students of Region I of the District of Columbia Public Schools. (University of Maryland, 1978.) DAI 40A: 804; August 1979. [7917376]

Significant differences were found only at the fifth-grade level, favoring students of teachers who had the mathematics in-service program. (teachers in grades 4-6)

Johnson, Nancy Plattner. Mathematics Problem Solving and Classroom Environment. (The University of Wisconsin-Madison, 1979.) DAI 40A: 3172; December 1979. [7922121]

Students in an open classroom environment scored significantly higher in mathematical problem solving than those in a traditional environment. (grade 6)

Johnston, Wade Williams. Hemisphere Differences in a Mental Rotation Task. (Rutgers University The State University of New Jersey, 1978.) DAI 39B: 6121; June 1979. [7911952] [college]

Jones, Barry Travis. A Longitudinal Study of Piagetian Conceptual Development Related to Self Concept and Locus of Control in

Elementary School Children. (The Ohio State University, 1978.) DAI 39B: 4065; February 1979. [7902152] [grades K-1, 4-5]

Jones, Dan Robert. The Mental Representation of Three-Dimensional Shape Conceptualized from Two-Dimensional Perspective Views by Sixth and Eighth Grade Students. (Indiana University, 1978.) DAI 39A: 5429-5430; March 1979. [7905969]

Boys performed on the tasks at a higher level than girls did. Four successful solution processes were used. (grades 6, 8)

Jones, Robert Kenneth. An Evaluation of an Intra-Class Peer-Tutoring Instructional Strategy, Department of Defense Dependents Schools, Europe. (University of Southern California, 1979.) DAI 39A: 7135; June 1979. [--]

Students helping students was as effective as teacher helping students. (grade 7)

Just, Steven Barry. Spatial Reasoning Ability as Related to Achievement in a Dental School Curriculum. (Rutgers University The State University of New Jersey (New Brunswick), 1979.) DAI 40A: 779; August 1979. [7917911] [college]

Kahl, Stuart Reid. Selected Parental and Affective Factors and Their Relationships to the Intended and Actual Mathematics Course Enrollment of Eighth and Eleventh Grade Males and Females. (University of Colorado at Boulder, 1979.) DAI 40A: 1933-1934; October 1979. [7923254]

Significant differences in attitude were found between boys and girls. Attitudes and actual mathematics course participation were moderately correlated. Active encouragement by parents had more effect than passive role modeling. (grades 8, 11)

Kane, Janet Fenton. A Comparison of Learning Disabled Children with Learning Disabled Adolescents Relative to Non-Learning Disabled Peers in Terms of Selected Achievement, Affective and Behavioral Variables. (The Johns Hopkins University, 1979.) DAI 40A: 197; July 1979. [7914305] [grades 3-4, 8-9]

Kane, Maxine Pallas. Spatial Cognition in Deaf and Normal-Hearing Subjects. (University of Pittsburgh, 1979.) DAI 40A: 2553-2554; November 1979. [7924723] [ages 8-11, 15-18]

Karp, Cheryl Lee Davison. Behavioral and Symbolic Modeling as Feedback in the Acquisition of Hierarchically Arranged Skills. (The University of Arizona, 1978.) DAI 39A: 6031; April 1979. [7908370]

Behavioral modeling and behavioral plus symbolic modeling were more effective as feedback than symbolic modeling or no feedback. (elementary ?)

Karr, Linda Grace Jones. The Effects of Token Reinforcement in a Computer Assisted Instruction Program. (Texas A&M University, 1978.) DAI 39A: 6606; May 1979. [7909212]

The token reinforcement system did not increase mathematical achievement when combined with a CAI program. (grade 5)

Keehner, James Martin. The Relationship of Serum Uric Acid to Intelligence, Achievement, and Need for Achievement in U.S. Adolescents, Twelve Through Seventeen Years of Age, 1966-1970. (The Catholic University of America, 1979.) DAI 40A: 1283; September 1979. [7920555] [ages 12-17]

Kelly, Gwendolyn Nell. Analysis of College Females' Perception of Liquid Horizontality. (Washington State University, 1979.) DAI 40A: 1934; October 1979. [7923487] [college]

King, Gail Fultz. Effects of Changing the Conceptual Tempo of Impulsive Children. (The University of Texas at Austin, 1979.) DAI 40A: 1359; September 1979. [7920143] [grade 3]

Kingston, Neldon DeVere. Reality Based Mastery Intervention Procedures: An Assessment. (Utah State University, 1978.) DAI 40A: 793; August 1979. [7917965]

The mastery learning program was effective in teaching basic mathematics facts. (grades 2-4)

Kirk, Sandra Kurtze. The Effect of Mathemagenic Cues on Retention of Graphically Presented Data. (The University of Florida, 1978.) DAI 39A: 6006; April 1979. [7907761]

A specific cue facilitated retention of specific factual information, while a general cue was better for general relationships. Students trained to generalize from graphs were more likely to do so with both types of cues. (grades 5, 8)

Kirkpatrick, Melvin Andrew. A Comparison of a Multimedia Approach and a Programmed Approach in Teaching a Basic Algebra Course at Roane State Community College. (The University of Tennessee, 1978.) DAI 39A: 6506; May 1979. [7911688]

The multimedia instruction group achieved significantly higher scores than the programmed instruction group. No attitude differences were found. (community college)

Klein, Evelyn Barbara. An Instrument for Appraisal of Children's Quantitative Abilities Prior to Formal Mathematics Instruction in Grade One. (Temple University, 1979.) DAI 40A: 2468-2469; November 1979. [7924066]

Reliabilities of .85, .90, and .91 were determined for the inventory test. (grade K)

Knippenberg, Gary Paul. An Exploratory Study of the Effects of Instruction in Heuristics upon the Mathematical Problem-Solving Ability and Attitudes of Preservice Elementary Teachers. (Michigan State University, 1978.) DAI 40A: 724-725; August 1979. [7917734]

Some changes in the use of heuristics were noted after instruction. (elementary preservice)

Knoblauch, Susan Frances. An Investigation of Affective and Achievement Outcomes in a College Arithmetic and Elementary Algebra Program Using Four Treatment Goal Structures (Volumes I and II). (University of Minnesota, 1978.) DAI 39A: 7203-7204; June 1979. [7912017]

A significantly higher number of credits were earned by lower-entry students who studied in groups compared to those who studied individually. (college)

Kolpas, Sidney J. The Use of Electronic Calculators as In-Class Instructional Aids in a Ninth-Grade Arithmetic Program. (University of Southern California, 1979.) DAI 39A: 5293; March 1979. [--]

No significant differences on a standardized test were found between calculator and non-calculator groups. Differences favoring calculator groups were found on teacher-made tests, however. (grade 9)

Kongkitpisal, Piyarat. The Effect of Two Instructional Approaches on Logical Concept Learning of First Year College Students. (The University of Michigan, 1979.) DAI 40A: 725; August 1979. [7916749]

The concrete approach was slightly more effective than the symbolic approach for classes of Thai students. (college freshmen)

Koop, Janice Baker. A Description of the Effects of the Use of Calculators in the Community College Arithmetic Class. (University of Colorado at Boulder, 1978.) DAI 39A: 4791; February 1979. [7903069]

No significant differences were found on problem solving or computation between calculator and non-calculator groups. However, young students using calculators had higher scores, as did students over 29 not using calculators. (community college)

Kostaki, Stavroula Eriketta. The Mathematics Program of the Greek High School in Terms of Internationally Acceptable Patterns and Practices in Mathematics Education. (The University of North Carolina at Greensboro, 1978.) DAI 39A: 4103; January 1979. [7824892] [secondary]

Krustchinsky, Richard Eugene. The Effects of an Early Participatory Field Experience Program upon the Teaching Concerns of Elementary Preservice Teachers and Their Attitudes Toward Mathematics and Science. (University of Southern Mississippi, 1979.) DAI 40A: 1264; September 1979. [7919698]

No significant differences were found between participants and non-participants in the field experience program on measures of attitude or teacher concerns. (elementary preservice)

Ladner, Judith Sleppy. The Impact of Back-to-Basics Education upon Creativity, Affectivity, and Achievement of Elementary School Children. (University of the Pacific, 1979.) DAI 40A: 1265; September 1979. [7919894] [grade 5]

LaFornara, Paul A. The Relationship of Powerlessness and Norm Rejection in Elementary School Attendance Areas to Educational Achievement and Student Alienation. (State University of New York at Buffalo, 1979.) DAI 40A: 786; August 1979. [7918752] [elementary]

LaFrenz, Dale Eugene. The Documentation and Formative Evaluation of a Statewide Instructional Computing Network in the State of Minnesota (Volumes I and II). (University of Minnesota, 1978.) DAI 39A: 7062-7063; June 1979. [7912039] [--]

LaNeve, George L. The Effects of Directed Vocabulary Study on Students' Ability to Master the Basic Concepts of Mathematics. (University of Pittsburgh, 1978.) DAI 39A: 4792-4793; February 1979. [7902712]

No significant difference in achievement was found between groups taught or not taught 62 mathematical terms in isolation. (grade 7)

Lee, Sandra Gale. Creativity and Its Implications for Secondary College-Preparatory Mathematics Educatio.. (The University of North Carolina at Greensboro, 1978.) DAI 39A: 7204; June 1979. [7913053]

A model was developed incorporating creative course content, creative strategies, and flexible classroom organization. (secondary)

Leeds, Anna Lewis and Schoenbeck, Paul Harry. An Evaluative Study of Functionally Illiterate Adults Enrolled in a Special English and Mathematics Program in a Community College. (United States International University, 1977.) DAI 39B: 5651; May 1979. [7909575] [community college]

Legette, Helen Rogers. Self-Concept and Academic Achievement: A Comparison of Intellective and Non-Intellective Variables as Predictors of Scholastic Performance and Analysis of Subgroup Differences in Self-Concept. (The University of North Carolina at Greensboro, 1979.) DAI 40A: 1877; October 1979. [7922414] [grades 7, 9, 11]

Lemasters, Clair Rogers. An Experimental Study to Determine the Effectiveness of Sketching Practice as a Part of an Audio-Visual Presentation on Graphical Calculus. (The Ohio State University, 1979.) DAI 40A: 1926-1927; October 1979. [7922512] [community college]

Lester, Louise Rainey. An Investigation into the Acceleration of Basic Quantitative Skills of Educationally Disadvantaged Rural Primary School Children Using Hutchings Low Stress Procedures. (University of South Carolina, 1978.) DAI 39A: 5908-5909; April 1979. [7907613]

The low-stress groups showed greater gains on addition and subtraction facts and computation than traditional groups did. (grades 1-3)

Lockyer, Lois Hutsell. Patterns of Lower-Division Curriculum at the University of Georgia. (University of Georgia, 1979.) DAI 40A:

1905; October 1979. [7923127] [college juniors]

Longenecker, Joseph Lee. The Effects of an ESEA Title I Summer Reading and Mathematics Program on Achievement Test Scores of Participating Students. (Temple University, 1979.) DAI 40A: 2470; November 1979. [7924068]

The summer school group made higher mean gain scores on a November mathematics test than the group that had not attended summer school. (elementary)

Loughran, Paul Andrew. Administrator and Teacher Attitude, Work Environment, and Mathematics Achievement in System and Non-System Approaches. (Fordham University, 1979.) DAI 40A: 1187; September 1979. [7920676]

Pupils having the system approach had significantly higher achievement than those having the non-system approach. (grades 3, 6)

Lumley, Jimmy Falconer. An Assessment of Mathematical Attainment of Students in a Community College Using the Results of the First National Assessment in Mathematics as a Comparative Base. (Auburn University, 1979.) DAI 40A: 3221; December 1979. [7927596]

Differences on many topics were found when results for community college adults were compared with NAEP data. (community college)

Lunder, Dennis Arne. The Impact of the Calculator on Test Anxiety for High School Consumer Mathematics Students. (University of Denver, 1978.) DAI 39A: 6607; May 1979. [7910673]

No evidence was found that calculators reduced anxiety, or that girls have more test anxiety than boys. Calculators did have a positive effect on achievement, however. (grades 9-12)

Makoshi, Abdullah Abdar-Rahman. An Analysis of the Mathematics Curriculum in the Public Secondary Schools in Saudi Arabia. (University of Northern Colorado, 1978.) DAI 39A: 6607-6608; May 1979. [7910306] [secondary]

Malone, Francis Gordon. An Assessment of the Attitudes of Industrial Arts Teachers Toward Metrication in Mississippi. (Mississippi State University, 1978.) DAI 39A: 4095; January 1979. [7900153] [secondary teachers]

Masse, Marie A. The Relationship of Class Inclusion, Computational Skill, and Mode of Presentation to Four Categories of Subtraction Problems. (Boston University School of Education, 1979.) DAI 39A: 7204-7205; June 1979. [7912192]

Pupils who had mastered class inclusion scored higher on all types of subtraction problems. Most problems involving regrouping were more difficult in the concrete mode. (grades 2, 3)

Matthes, Lloyd Jacob. A Comparative Study of the Effects of Required Homework or Quizzes on Achievement in an Undergraduate Mathematics Service Course. (The University of Tennessee, 1978.) DAI 39A: 6608; May 1979. [7911694]

No significant differences in achievement were found between treatments, although most students preferred homework as part of their mode of study. (college)

McAndrew, Claire Coyne. A Comparison of Prediction Models Used for Predicting College Grade Point Average. (Lehigh University, 1979.) DAI 39A: 6086; April 1979. [7908515] [college freshmen]

McConnell, John William. Relationships Among High-Inference Measures of Teacher Behaviors and Student Achievement and Attitude in Ninth Grade Algebra Classes. (Northwestern University, 1978.) DAI 39A: 6608-6609; May 1979. [7907958]

Several measures of teacher behavior were found to be valid predictors of pupil achievement and attitude. (grade 9)

McDaniel, Cynthia Rose. Memory and Strategy in Thinking. (University of Cincinnati, 1979.) DAI 40B: 1931; October 1979. [7922610] [?]

McDaniel, Elizabeth Ann. The Effect of Cognitive Training on the Thinking Skills, Conceptual Tempo, and Academic Achievement of Learning-Disabled Junior High School Students. (University of Miami, 1978.) DAI 39A: 7284; June 1979. [7911798] [junior high]

McDougal, James Michael. The Effect of Chisanbop Mathematics Calculation on the Achievement of Fourth Grade Students. (North Texas State University, 1979.) DAI 40A: 1326-1327; September 1979. [7919735]

Pupils taught Chisanbop scored significantly higher than the non-Chisanbop group on application, concept, and problem-solving subtests, but no differences in computation were found. (grade 4)

McKay, Lucia Romberg. Sex Differences in Cognitive Styles and Mathematics Achievement in Fourth and Eighth Graders. (The University of Texas at Austin, 1978.) DAI 39A: 4103-4104; January 1979. [7900606]

No significant differences between males and females were found for IQ, mathematics achievement, locus of control, field independence, and spatial visualization. (grades 4, 8)

McMahon, Albert Joseph. The Relationship Between the Pupil Control Ideology of Mathematics Teachers and Student Attitude Toward Mathematics. (Saint Louis University, 1979.) DAI 40A: 2524-2525; November 1979. [7923654]

Students with more humanistic teachers had better attitudes toward mathematics. (grade 9)

McNeary, Paul Robert. The Identification of Problems in Implementing Metrics in Oklahoma's Area Vocational-Technical Schools. (Oklahoma State University, 1978.) DAI 39A: 4910; February 1979. [7903705] [vocational school]

Mercer, Maryann. Answer Changing and Students' Test Scores. (Rutgers University The State University of New Jersey (New Brunswick),

1978.) DAI 40A: 214; July 1979. [7914126] [grades 4-7]

Messerer, Jeffrey Alan. A Study of the Relationship Between Two Modes of Cognitive Assessment During the Piagetian Preoperational-Concrete Operational Stage Transition: Piagetian Problem Solving Ability Versus IQ Test Performance. (Indiana University, 1979.) DAI 40A: 1967; October 1979. [7921321] [ages 6, 8]

Metarko, Peter Francis. Analysis of Admission Variables with Freshman College Academic Success at Indiana University of Pennsylvania. (University of Pittsburgh, 1978.) DAI 39A: 4763; February 1979. [7902719] [college freshmen]

Metwali, Samia Mohamed. Expressed Interest and Extent of Practice as They Affect Outcomes of Instruction in Problem Solving. (The Ohio State University, 1979.) DAI 40A: 1934-1935; October 1979. [7922529]

Giving few problems along with discussion was more effective than working many problems. (grade 8)

Michael, Nagi Descoress. Cognitive Levels of Expected Student Behavior in Textbook Problem Sets and Final Examinations in Tenth Grade Modern Mathematics in Egypt. (University of Pittsburgh, 1978.) DAI 40A: 652; August 1979. [7917436] [grade 10]

Miller, Charles John, Jr. The Effects of Duration and Time of Classes on the Achievement and Attitudes of Students in College Mathematics. (George Peabody College for Teachers, 1978.) DAI 39A: 4793; February 1979. [7902507]

No significant difference in achievement was found between groups meeting for one long or two short sessions per week. (community college)

Miller, Joan Doris. Perceptual Skills and Knowledge Required for Attainment of the Concept Triangle by Young and Retarded Children. (Fordham University, 1979.) DAI 40A: 1247-1248; September 1979. [7920679] [ages 3-6, 7-14 (EMRs)]

Mitchum, Nancy Taylor. The Effects of Group Counseling on the Self-Esteem, Achievement and Sex Role Awareness of Children. (The University of Florida, 1978.) DAI 39A: 4062; January 1979. [7900079] [grade 5]

Moehrlin, Raymond M. Bessel Functions: An Independent Study Course. (Illinois State University, 1979.) DAI 40A: 726; August 1979. [7917898]

A five-unit instructional package was developed. (college)

Moers, David Robert. Maximizing the Predictive Validity of Criterion-Referenced Tests. (Arizona State University, 1979.) DAI 40A: 763; August 1979. [7917944] [college]

Monell, Carol Ann. A Comparative Study of the Critical Elements Present in Successful and Unsuccessful ESEA Title IV-C Mathematics

Projects. (University of Southern California, 1979.) DAI 39A: 7205; June 1979. [--]

Eleven critical elements of successful programs were identified, and found to be present to a higher degree in successful projects. (grades K-12]

Morgali, Ronald Ralph. The Validation of an A Priori Learning Hierarchy Posited for the Addition of Algebraic Fractions. (University of Oregon, 1979.) DAI 40A: 3172; December 1979. [7927262]

The hierarchy was found to be valid. (grades 8-13)

Morris, Curtis Junius. The Development and Evaluation of Curriculum Materials to Teach Specified Objectives of Carrying and Borrowing in Mathematics to Selected Elementary School Pupils. (University of Massachusetts, 1979.) DAI 40A: 1327; September 1979. [7920875]

The curriculum materials were found to be effective when tried out with small groups of pupils. (grades 2, 3)

Morton, Joseph Raymond, Jr. An Evaluation of the Learning Effectiveness of a Team-Taught, Individually-Paced Instruction Program in High School Algebra. (Memphis State University, 1979.) DAI 40A: 1248; September 1979. [7919873]

Students in general did not learn significantly more algebra in the team-taught program than in the conventional program, but it appeared better for some low achievers and females. (grade 9)

Mossler, Daniel Glenn. The Emergence of Concrete Operations: Some Methodological and Conceptual Considerations. (University of Virginia, 1978.) DAI 39B: 4011; February 1979. [7903535] [ages 4-6]

Moyer, Margaret Bannochie. An Investigation of Spatial Visualization Abilities in Normal and Learning Disabled Children. (Northwestern University, 1978.) DAI 39A: 6070; April 1979. [7907917] [ages 9, 10]

Mueller, Donald F. A Comparison of Open and Traditional Classrooms: Academic Achievement--Attitudes and Self Concept. (University of South Dakota, 1976.) DAI 39A: 5312; March 1979. [7904941] [grades 3-6]

Mullen, Gail Shepherd. Measurement Understanding of Elementary School Teachers. (University of Virginia, 1978.) DAI 40A: 3173; December 1979. [7928058]

Only two-thirds of the items on the measurement survey were answered correctly. (elementary in-service)

Mullis, Ina Van Slyke. Effects of Home and School on Learning Mathematics and Political Knowledge and Attitudes. (University of Colorado at Boulder, 1978.) DAI 39A: 4893; February 1979. [7903076] [?]

Muraski, Virginia Sue. A Study of the Effects of Explicit Reading Instruction on Reading Performance in Mathematics and on Problem Solving Abilities of Sixth Graders. (Michigan State University, 1978.) DAI 39A: 4104; January 1979. [7900730]

The group having instruction on five reading skills had higher gains in problem solving. (grade 6)

Myers, Cheryl Reece. Comprehension of the Metric System and Attitudes Toward Metrication Among Professional Interior Designers in the American Society of Interior Designers. (Oklahoma State University, 1978.) DAI 39A: 4778-4779; February 1979. [7903713] [adults]

Myers, Shirley Piper. Changes in the Content Sequence of Elementary Algebra from 1894 to 1977. (Kent State University, 1978.) DAI 39A: 7206; June 1979. [7912522]

Changes during six time intervals were related to each other. (grade 9)

Nadler, Frederick Francis. A Correlation Analysis of Local and State Minimum Competency Standards in New Jersey Schools. (Rutgers University The State University of New Jersey (New Brunswick), 1978.) DAI 40A: 552-553; August 1979. [7914128] [grades 4, 7, 10]

Nardi, Thomas J. The Effects of Need for Achievement, Fantasy Aggression and Induced Aggression on Academic Performance in Male College Students. (St. John's University, 1978.) DAI 39B: 3490; January 1979. [7900273] [college]

Nelson, Gayle Gulick. Math Avoidance in Girls. (University of Washington, 1979.) DAI 40A: 764; August 1979. [7917613]

Participants in a modeling and counseling treatment signed up for more mathematics classes. (grade 10)

Nelson, Roberta Emery. Sex Differences in Mathematics Attitudes and Related Factors Among Afro-American Students. (The University of Tennessee, 1978.) DAI 39A: 4793-4794; February 1979. [7903453]

Few sex differences were found in attitudes toward mathematics or achievement; when found, they favored males. (grades 5, 11)

Newman, Deena Rosenfeld. Matched Student/Teacher Academic Engagement in Direct and Nondirect Instructional Settings. (Syracuse University, 1979.) DAI 40A: 2608; November 1979. [7925591] [grade 5]

Nguyen, Liem Thanh. Relationship Between Perceived Adaptation to the New School Setting and Academic Standing in the New School Among the Indochinese Refugee Students in Iowa Junior and Senior High Schools. (Iowa State University, 1979.) DAI 40A: 2529; November 1979. [7924258] [secondary]

Nordin, Abu Bakar. The Effects of Different Qualities of Instruction on Selected Cognitive, Affective and Time Variables. (The University of Chicago, 1979.) DAI 40A: 3094; December 1979. [--] [grade 6]

Obey, Joseph Alexander. The Relationship of the Toward Affective Development (TAD) Program to Student Achievement, Self Concept, and Affective Development. (The University of Wisconsin-Madison, 1978.) DAI 40A: 1340-1341; September 1979. [7916577] [grade 4]

O'Dell, Robert Thomas. The Implication of Microprocessor Technology upon Computer Managed Instruction. (Wayne State University, 1979.) DAI 40A: 1753-1754; October 1979. [7921706] [--]

Odell, Sandra Jean. Piagetian Conservation in Navojos. (The University of New Mexico, 1978.) DAI 39A: 7139-7140; June 1979. [7912939] [ages 5-7, 9, 11, 13, adult]

O'Neil, Michael John. A Study of the Curricular Validity of Selected Standardized Mathematics Achievement Tests Used for Evaluation of Remedial Programs in the State of New York. (State University of New York at Albany, 1979.) DAI 40A: 1249; September 1979. [7917837]

Less advanced test forms were more congruent with remedial curricula than more advanced forms. Substantial differences in test content were found for more than half the curricula. (grade 7)

O'Shaughnessy, Thomas Edward. Cognitive Development, Language Acquisition, and the Development of Conditional Reasoning in Children. (Indiana University, 1978.) DAI 39A: 5418; March 1979. [7906022] [grades 1-3]

Oskooilar, Nader. The Effect of Solvability and Unsolvability Experience on Students' Intelligence Test Performance. (The Florida State University, 1978.) DAI 40A: 764-765; August 1979. [7917063] [grades 6-8]

Ott, William Richard. An Investigation of Certain of Piaget's Infralogical Groupings Dealing with Projective and Euclidean Space. (The University of Iowa, 1978.) DAI 39A: 4848-4849; February 1979. [7902928] [grades 8, 10, 12]

Pachter, Stephen Neil. A Computer Assisted Tutorial Module for Teaching the Factoring of Second Degree Polynomials to Regents Level Ninth Year Mathematics Students. (Columbia University Teachers College, 1979.) DAI 40A: 1843; October 1979. [7923610]

The CAI group achieved higher scores than the conventional group. (grade 9)

Packer, Claude Montgomery. The Effects of Hand Calculators on Attitude, Achievement and Retention of Students in College Level Mathematics. (Cornell University, 1979.) DAI 40A: 3095; December 1979. [7926943]

No significant differences were found between calculator and non-calculator groups on achievement, retention, attitude, or problem-solving ability, although accuracy scores favored the calculator group. (college)

Palmer, Chester Irving. A Procedure for Constructing College

Mathematics Placement Tests. (Auburn University, 1979.) DAI 40A: 142; July 1[illegible] [7914073]

Correlations with grades were between .47 and .64. (college)

Paritch, Deborah H. The Relative Contribution of Mother and Father Nurturant Behaviors and Parental Identification to Academic Achievement in Latency Aged Boys. (The Ohio State University, 1979.) DAI 40B: 1908; October 1979. [7922537] [grades 4, 5]

Paolini, Mary Wagner. The Use of Manipulative Materials Versus Non-Manipulative Materials in a Kindergarten Mathematics Program. (University of South Dakota, 1977.) DAI 39A: 5382; March 1979. [7904927]

No significant difference in achievement was found between pupils using or not using manipulative materials. (grade K)

Papritan, James Carl, II. The Effect of Pocket Calculators Versus Paper and Pencil Procedures on Algorithm Achievement of Vocational Agriculture Students. (The Ohio State University, 1978.) DAI 39A: 4660; February 1979. [7902202] [grade 10]

Parete, Jesse David. Formal Reasoning Abilities of College Age Students: An Investigation of the Concrete and Formal Reasoning Stages Formulated by Jean Piaget. (The Ohio State University, 1978.) DAI 39A: 6006; April 1979. [7908195]

Percentages of students at each reasoning level were: early concrete, 21 per cent; late concrete, 30 per cent; transitional, 10 per cent; early formal, 29 per cent; late formal, 10 per cent. (college freshmen)

Parrish, John Macon. A Comparison of Cognitive Strategies in Modifying the School Performance of Impulsive Third Grade Children. (Virginia Commonwealth University, 1979.) DAI 39B: 5574; May 1979. [7909744] [grade 3]

Patrick, Sarah Emmaline. The Association of Mathematics Anxiety with Specific Junior High and High School Mathematics Courses. (Georgia State University-College of Education, 1978.) DAI 39A: 6609; May 1979. [7908496]

No significant difference was found in the level of mathematics anxiety associated with course or sex, but some test anxiety was found. (grades 9, 10)

Paul, Clyde Alan. Development of a Group Test to Measure Attainment of Piaget's Formal Operations Stage. (University of Kansas, 1977.) DAI 39A: 4030; January 1979. [7824843] [college]

Pedersen, Dean Anthony. The Effect of the Calculator on the Elementary Mathematics Student. (University of Northern Colorado, 1978.) DAI 39A: 4794; February 1979. [7902850]

No significant difference in achievement was found between calculator and non-calculator groups. (grades 2, 3, 6)

Pelosi, Philip Anthony. The Effects of Verbalization on Using Discovered Mathematical Generalizations. (The University of Connecticut, 1979.) DAI 40A: 142; July 1979. [7914178]

Verbalization of a discovered concept did not affect use of the discovery on tests. (grade 12)

Penn, Howard Love. An Attitudinal and Correlational Study of Mathematics Instructors Concerning Certain MAA-NCTM Recommendations and the Teaching of College Preparatory Mathematics Courses. (North Texas State University, 1978.) DAI 39A: 4079-4080; January 1979. [7824664]

No significant differences were found in the attitudes of three groups of instructors toward the recommendations regarding college-preparatory courses. (secondary and college teachers)

Perner, Josef. The Development of Children's Understanding of Principles Governing Decisions Under Risk or Uncertainty. (University of Toronto (Canada), 1978.) DAI 39B: 3561; January 1979. [--] [ages 4-10]

Perl, Teri Hoch. Discriminating Factors and Sex Differences in Electing Mathematics. (Stanford University, 1979.) DAI 40A: 1327-1328; September 1979. [7917272]

Ability and achievement, together with some attitude measures, have the most effect on "electing" for both boys and girls. (grades 10-12)

Peteet, Joanne Kuehn. A Study of Success Predictors for a College Algebra Course in the Community College. (The University of Texas at Austin, 1978.) DAI 39A: 4007-4008; January 1979. [7900614]

Students' success was related to level of mathematical preparation, plus status, age and study attitudes. (community college)

Petitto, Andrea Lee. Knowledge of Arithmetic Among Schooled and Unschooled African Tailors and Cloth-Merchants. (Cornell University, 1979.) DAI 39A: 6609-6610; May 1979. [7910768] [adult]

Pezzino, James. The Effects of Abrupt and Graduated Temporal Reductions on Academic Behavior. (Utah State University, 1979.) DAI 40A: 766; August 1979. [7917979] [elementary]

Pottorff, Donald Dean. Profile of the Salient Characteristics of Non-promoted First Grade Children. (Michigan State University, 1978.) DAI 39A: 5937; April 1979. [7907385] [grade 1]

Preston, David George. The Effects of the Two-Week Project SEED In-Service Program on Classroom Teacher Verbal Behavior. (University of Maryland, 1978.) DAI 40A: 1419; September 1979. [7920737]

Teachers in the SEED program made extensive use of the techniques modeled. (elementary in-service)

Pridmore, Brooke McCoy. Predicting Success in a Non-Calculus Based Physics Course at a State Supported Junior College. (Georgia State

University-College of Education, 1978.) DAI 39A: 4168; January 1979. [7900124] [junior college]

Putt, Ian John. An Exploratory Investigation of Two Methods of Instruction in Mathematical Problem Solving at the Fifth Grade Level. (Indiana University, 1978.) DAI 39A: 5382-5383; March 1979. [7906255]

No significant difference in problem-solving performance was found between groups taught or not taught heuristics, although how students solved problems changed when they were taught heuristics. (grade 5)

Quayhagen, Margaret. Modification of Spatial Performance in Two Cohorts of Older Women. (University of Southern California, 1979.) DAI 40B: 957-958; August 1979. [--] [adults]

Quilter, Joan Mary. The Psychological Processing of Symbolic Information by Arithmetic Underachievers. (St. John's University, 1978.) DAI 39B: 4049-4050; February 1979. [7900279]

Arithmetic underachievers of average and high ability were significantly weaker in visual processes than achievers were. (grades 2, 3)

Ramage, Roger Lee. A Study of the Effects of Activity Group Counseling on the Self-Concepts, Teachers' Ratings of Student Behavior, and Achievement of Fourth and Fifth Grade Students with Learning Disabilities. (The Medical College of Pennsylvania, 1979.) DAI 40A: 1882; October 1979. [7921769] [grades 4, 5]

Ramaswamy, Thirumalai. Formulation and Validation of a Bayesian Efficient Testing Model Which Uses Rasch's Latent-Trait Theory and Linear Guessing Correction. (The Florida State University, 1976.) DAI 40A: 811-812; August 1979. [7917072] [grade 9]

Richmond, Glayvera. A Study of Competency-Based Education in Mathematics. (Indiana University, 1979.) DAI 40A: 726-727; August 1979. [7916922]

A significant difference in achievement was found between students having CBE and conventional instruction. (grade 9)

Rivera, Gilbert David. A Process Model for the Development of Culture-Based Learning Experiences. (North Texas State University, 1978.) DAI 39A: 4104-4105; January 1979. [7824668] [elementary]

Roberts, Franklin Campbell. An Investigation of the Relationship Between Cognitive Entry Behaviors and Variation in Time-On-Task in a Hierarchically Structured, Computer-Controlled Course in Basic Mathematics Modeled on the Principles of Mastery Learning. (The Pennsylvania State University, 1979.) DAI 40A: 1845; October 1979. [7922338]

No significant differences in time-on-task were found between students at high or low entry levels. (secondary)

Robertson, Joan H. Samson. The Effectiveness of Piagetian Conservation Tasks in the Prediction of Arithmetic Achievement of Second Grade Students. (Northeast Louisiana University, 1979.) DAI 40A: 2462; November 1979. [7925306]

The conservation tasks were not significantly correlated with addition and subtraction achievement, 85 per cent of which was explained by IQ. (grade 2)

Robinson, Annie Grace. A Compared Difference in Pupil Performance as a Function of Teacher Presented Material (1-1), Peer (Cross-Age) Presented Material, Teacher Presented Material (1-5), and Massed and Spaced Scheduling of Instruction. (University of Kansas, 1978.) DAI 39A: 6701-6702; May 1979. [7910624] [elementary]

Robinson, Holly Anglin. The Development of District Minimum Standards and Implementation Plans in New Jersey: A Study of Decision-Making on the Local Level. (Rutgers University The State University of New Jersey (New Brunswick), 1979.) DAI 40A: 786-787; August 1979. [7917916] [grades K-12]

Robinson, John G. An Evaluation of Project Boost, a Program for 1976 First Semester Freshmen on Academic Probation at Oklahoma State University. (Oklahoma State University, 1978.) DAI 39A: 4737-4738; February 1979. [7903737] [college freshmen]

Rodrigue, Paulette Richard. Student Achievement in Mathematics in Terms of Class Scheduling. (The Louisiana State University and Agricultural and Mechanical College, 1979.) DAI 40A: 3173-3174; December 1979. [7927543]

First, second, or fifth period was found to be advantageous to achievement in algebra; fourth and sixth periods were least advantageous. (secondary)

Roland, Leon Harvey. Use of a Multidimensional Attitude Scale to Measure Grade and Sex Differences in Attitude Toward Mathematics in Second Through Sixth Grade Students. (University of Washington, 1979.) DAI 40A: 3174; December 1979. [7927861]

The Fennema-Sherman Scales were reworded and tested with elementary pupils. Scores tended to increase as grade level increased. (grades 2-6)

Roller, Beverly VanOrden. Graph Reading Abilities of Seventh Grade Students. (State University of New York at Buffalo, 1979.) DAI 40A: 785-786; August 1979. [7918755] [grade 7]

Romero, Roger Cervantez. Student Achievement in a Pilot Cureton Reading, Cuisenaire Mathematics Program, and Bilingual Program of an Elementary School. (Northern Arizona University, 1977.) DAI 39A: 4033; January 1979. [7824571]

The Cuisenaire program was significantly more effective than the regular program only in grades 1 and 6. (grades 1-6)

Rose, Janet Susan. Relationships Among Teacher Locus of Control,

Teacher and Student Behavior, and Student Achievement. (University of South Carolina, 1978.) DAI 39A: 7250-7251; June 1979. [7911856] [teachers in grade 4]

Ross, Lynne Nannen. Comparison of Learning Using Expository and Problem Solving Methods in Teaching Metrics. (Iowa State University, 1978.) DAI 39A: 5989; April 1979. [7907280] [adults]

Rudd, Peggy Ray. Basic Educational Programs in the United States and Their Relationships to Educational Priorities and Achievement Gains. (University of Houston, 1979.) DAI 40A: 1197; September 1979. [7919390] [--]

Russell, Roger Edwin. The Effects of the Inherent Structure of the 45-15 Year-Round Schedule on Student Achievement in the Francis Howell School District. (Saint Louis University, 1979.) DAI 40A: 1801-1802; October 1979. [7923676] [grade 8]

Russo, Nancy Atwood. The Effects of Student Characteristics, Educational Beliefs and Instructional Task on Teachers' Preinstructional Decisions in Reading and Math. (University of California, Los Angeles, 1978.) DAI 39A: 4719-4720; February 1979. [7901394] [teachers in grades 1-3]

Rutledge, David Eric. The Effects of Two Decoding Programs upon the Mathematics Problem Solving Achievement of Fifth Grade Students. (The University of Nebraska-Lincoln, 1978.) DAI 39A: 4105; January 1979. [7900351]

Both the decoding and the decoding/encoding groups scored significantly higher than the textbook group. (grade 5)

Sachs, Larry A. Definition Placement in Mathematics Concept Learning. (The Ohio State University, 1978.) DAI 39A: 6006-6007; April 1979. [7908208]

The inductive and deductive groups did not score differently over time, although some difference was noted on immediate achievement. (grade 5)

Sadowski, Barbara Rose. An Investigation of the Validity, Accuracy and Consistency of Prescriptions Derived from a Domain-Referenced Diagnostic Arithmetic Test and Interview Protocols. (University of Maryland, 1978.) DAI 40A: 1422; September 1979. [7920757]

The test was found to have validity, and comparable prescriptions were written from it. (grades 4, 5)

Sahagian, Edward James. Relationship Between Success in High School Geometry and Cognitive Development with Respect to Euclidean Measurement. (Rutgers University The State University of New Jersey (New Brunswick), 1978.) DAI 40A: 142-143; July 1979. [7914136]

Fifty-four per cent of the students demonstrated the cognitive ability required for Euclidean measurement. Higher cognitive level was associated with high geometric grades. (ages 14-16)

Salend, Spencer Jordan. Effects of Systematic Reinforcement Conditions on the Test Scores of Children Labeled Learning and Behaviorally Disordered. (University of Kentucky, 1978.) DAI 40A: 798; August 1979. [7918116] [ages 7-10]

Sanchez, Juanita L. A Comparison of Achievement of Mexican and Mexican-American Children in the Areas of Reading and Mathematics When Taught Within a Cooperative and Competitive Goal Structure. (University of California, Santa Barbara, 1979.) DAI 40A: 1333; September 1979. [7921046] [grades K-6]

Sanders, Hugh Alexander. A Comparison of Four Evaluation Models Applicable to College Remedial Mathematics Programs. (Georgia State University-College of Education, 1979.) DAI 40A: 1328-1329; September 1979. [7920006]

Three of four models were found to be useful for evaluating the programs. (college)

Sardeson, Karen Elizabeth. A Descriptive Study of Verbal and Physical Transitional Behavior During the Acquisition of the Concepts of Conservation: Toward a Better Understanding of Children in Cognitive Transition. (Southern Illinois University at Carbondale, 1979.) DAI 40A: 3207; December 1979. [7926326] [grades K, 1]

Saunders, James, Jr. The Effects of Using Computer-Enhanced Resource Materials on Achievement and Attitudes in Second Year Algebra. (University of Pittsburgh, 1978.) DAI 40A: 727; August 1979. [7917440]

The computer materials had no significant effect on algebra achievement or attitudes. (grade 11)

Schneider, Barbara Lynn. Production Analysis of Gains in Achievement. (Northwestern University, 1979.) DAI 40A: 3109-3110; December 1979. [7927443] [grades 3-7]

Schroeder, Mark Henry. Piagetian, Mathematical and Spatial Reasoning as Predictors of Success in Computer Programming. (University of Northern Colorado, 1978.) DAI 39A: 4850; February 1979. [7902855] [college]

Schwartz, Janice Ellen. A Study of Dyscalculia in the Elementary School Age Child-Incidence and Relationship to Gerstmann Syndrome. (Boston University School of Education, 1979.) DAI 40A: 2565; November 1979. [7923896]

Ten of 22 dyscalculic students fulfilled all criteria of the Gerstmann syndrome and the rest met some criteria. (grades 3, 4)

Scott, Joan Elizabeth. Presentation Rates and Immediate Reconstruction of Mathematical Material in an Adult Population. (University of Maryland, 1979.) DAI 40A: 3055; December 1979. [7926539]

No significant differences in achievement were found between groups presented statistics material on slide/tape at five speeds. (community college)

Scott, Nancy Peterson. An Observational Study of the Classroom Interactions of Elementary and High School Male and Female Teachers with Their Male and Female Students in Mathematics and English Classes. (The University of Wisconsin-Madison, 1978.) DAI 39B: 4654; March 1979. [7822273] [elementary, secondary]

Seghini, JoAnn Bagley. The Longitudinal Effects of Creativity Training. (The University of Utah, 1979.) DAI 40A: 2566; November 1979. [7924318] [junior high]

Segovia, Mercia Bristol. The Influence of Sex-Role Preference, Sex-Typing, and Social Desirability on Children's Reading and Arithmetic Achievement. (Temple University, 1979.) DAI 40A: 2566; November 1979. [7924025] [grades 4-6]

Shannon, Gregory Adville. Multivariate Study of Intellective and Nonintellective Factors Related to the Achievement of University Fresh Freshmen in a Basic Skills Program. (The Pennsylvania State University, 1978.) DAI 39A: 6039; April 1979. [7909129] [college freshmen]

Shebl, Abdulla Hamad. Development of a Model for a Mathematics Laboratory in Saudi Arabia. (University of Northern Colorado, 1978.) DAI 39A: 4794-4795; February 1979. [7902858] [secondary]

Shell, Vicki Ellis. Computational Concepts and Tasks Associated with Entry-Level General Merchandising Employees in the Columbus, Ohio; Louisville, Kentucky; and Nashville, Tennessee; Areas. (The Ohio State University, 1979.) DAI 40A: 73-74; July 1979. [7916026] [adults]

Shoaee, Rokhsareh. Application of Mastery Learning Theory to an Open-Learning System: The Case of the Free University of Iran. (The University of Wisconsin-Madison, 1979.) DAI 40A: 3156-3157; December 1979. [7922835] [college]

Shrock, Sharon Ann. Sex Differences in Problem-Solving Performance: The Roles of Ability, Cognitive Style, and Attitude. (Indiana University, 1979.) DAI 40A: 1972-1973; October 1979. [7921308] [college]

Siegel, Murray Harvey. The Effects of Student Participation on the Learning of Statistical Concepts in the Middle Grades. (Georgia State University-College of Education, 1978.) DAI 39A: 6007; April 1979. [7908498]

Method of instruction did not significantly affect achievement. (grades 5-7)

Silverstein, Joan Marion. Individual and Environmental Correlates of Pupil Problematic and Nonproblematic Classroom Behavior. (New York University, 1979.) DAI 40A: 2567; November 1979. [7925292] [grade 4]

Simmers, Marvin Lee. The Effects of Peer Tutoring upon Academic Achievement, Attitudes Toward Mathematics, and School Attendance

for Upper Elementary School Students. (University of Virginia, 1977.) DAI 39A: 4036; January 1979. [7901141]

Students having individual study with group-average reinforcement scored less well than other students. (grades 4-6)

Simon, Steven Jack. Behavioral Compensation: The Effects of Contrast Manipulations upon the Classroom Behavior of Deaf Children. (Georgia State University-College of Arts and Sciences, 1978.) DAI 39B: 4053-4054; February 1979. [7901817]

Achievement in mathematics was maximal when reinforcement was constant in a given setting and withdrawn from surrounding settings. (middle school)

Smith, Carol Annette. Effects of a Meaningful Treatment for Division of Fractions: A Comparative Study. (The University of Texas at Austin, 1979.) DAI 40A: 1329; September 1979. [7920210]

The common denominator method was more effective than inversion or textbook methods in only one of six comparisons. (?)

Smith, Joan Ann. Ascribed and Achieved Student Characteristics in Teacher Expectancy: Relationship of Socio-Economic Status to Academic Achievement, Academic Self-Concept, and Vocational Aspirations. (University of Illinois at Chicago Circle, 1979.) DAI 40B: 959-960; August 1979. [7916380] [elementary]

Smith, Joyce Evelyn. The Effects of Audio-Visual Instructional Materials and Activities on Carpentry Related Mathematics Achievement. (Oklahoma State University, 1979.) DAI 40A: 3209; December 1979. [7928236] [grades 11, 12]

Smith, Linda Nelson. A Comparison of Criterion-Referenced Evaluation Versus Norm-Referenced Evaluation in the Area of Mathematics for Selected Third and Fifth Graders in Okaloosa County. (The Florida State University, 1978.) DAI 39A: 6720-6721; May 1979. [7909800]

The standardized test could be used to predict achievement on the state assessment test. (grades 3, 5)

Smith, Susan Runaldue. Validation of Three Instructional Modes with Conservers and Nonconservers of Length Using Linear Metric Measurement. (The Pennsylvania State University, 1979.) DAI 40A: 1849; October 1979. [7922348]

Both conservers and non-conservers learned the measurement ideas taught, although iterative measurement was a difficult concept for both. Use of manipulative materials was more effective than graphic and symbolic modes. (grades 1, 2)

Snyder, Therese Elaine Ridgway. Effects of an Intervention Program to Integrate Communication Skills with Active Learning Techniques in Mathematics Computation. (United States International University, 1978.) DAI 39A: 5777; April 1979. [7908428]

The experimental group gains in computation over a three-year period were significantly greater than those of a comparison group. (grades 4-6)

Sorensen, Dennis Eugene. The Effects of Type of Instructional Objectives upon Higher Cognitive Mathematics Achievement. (The University of Texas at Austin, 1979.) DAI 40A: 1329-1330; September 1979. [7920214]

Students receiving objectives achieved significantly higher than those not receiving objectives, but no retention difference was found. (college)

Southall, John Carl. A Study for the Validation of an Instructional Sequence Designed to Teach Verbal Problem Solving in Elementary Mathematics. (The University of Texas at Austin, 1979.) DAI 40A: 1935-1936; October 1979. [7920215]

Some support was found indicating that a hierarchically valid sequence is necessary but not sufficient for improving problem-solving ability. (grades 3, 4)

Spratt, Eleanora Richardson. Effects of the Location of Subordinate Clauses on Comprehension of Arithmetic Problems by Sixth Graders. (Hofstra University, 1979.) DAI 40A: 179-180; July 1979. [7912470]

The location of clauses appeared to have no significant effect on problem comprehension, although variation in ability to write number statements was greater as the clause moved toward the end of the problem. (grade 6)

Stahlecker, Verlyn G. A Study of Mathematics Preparation for Elementary School Teachers. (University of Montana, 1978.) DAI 40A: 1330; September 1979. [7919543]

Teachers felt adequately prepared to teach number and operations, but not measurement and estimation. (elementary teachers)

Standifer, Charles Edward. Achievement and Attitude of Third-Grade Students Using Two Types of Calculators. (Northeast Louisiana University, 1978.) DAI 39A: 5314; March 1979. [7904877]

Significant achievement and retention differences favored use of calculators over use of programmed-feedback "calculators" or no calculators. (grade 3)

Starkey, Durward Prentice. Number Development in Young Children: Conservation, Addition and Subtraction. (The University of Texas at Austin, 1978.) DAI 39B: 3548; January 1979. [7900640]

Children ceased using length cues at an earlier age for number conservation tasks than for subtraction tasks. (ages 4-7)

Steinert, Martha Carlson. Construct and Criterion-Related Validity of the Boehm Test of Basic Concepts. (Kent State University, 1978.) DAI 39A: 7147-7148; June 1979. [7912527] [elementary]

Stene, John Wahl. Administrative and Instructional Use of Computers in South Dakota Public Secondary Schools: Current Status. (University of South Dakota, 1979.) DAI 40A: 1399; September 1979. [7919042]

Mathematics teachers who use computers have stronger backgrounds than non-users. (secondary)

Stout, Janice Louise. The Prediction of Stanford Achievement Test Scores from Lorge-Thorndike and Progressive Matrices Among Anglo and Chicano Pupils Differing in Language Background. (University of California, 1978.) DAI 40A: 174-175; July 1979. [7914781] [grades 5-8]

Straman, Minerva Constantine. Expressed Parental Attitudes Toward Child Rearing in Relation to Study Habits, Study Attitudes and Study Skills Achievement in Early Adolescence. (Andrews University, 1979.) DAI 39A: 7253; June 1979. [7912444]

Certain variables were found to be related to low mathematics achievement. (grades 7, 8)

Strasler, Gregg M. Student Learning Outcomes of Mastery Learning. (University of South Carolina, 1979.) DAI 40A: 1427-1428; September 1979. [7920063] [grade 7]

Tadlock, Dolores Rae. The Relationship of Conservation Abilities to Subsequent Reading Performance of First Grade Students. (Washington State University, 1978.) DAI 39A: 4720; February 1979. [7903594] [grade 1]

Taylor, Nancy Lee Hoffius. Predicting Success in Mathematics for Underprepared Community College Students. (Western Michigan University, 1978.) DAI 39A: 5363; March 1979. [7905580]

Criterion-referenced test results were as good a predictor as high school grades or standardized test results. (community college)

Tebeleff, Michael Gene. Reflectivity-Impulsivity as a Correlate of Reading and Math Achievement in 7, 9, and 11 Year Old Children. (The University of Texas at Austin, 1979.) DAI 39B: 5603; May 1979. [7911939]

Reflectivity-impulsivity variables correlated more strongly with mathematics than with reading achievement. (ages 7, 9, 11)

Thayer, Elizabeth Shapiro. An Investigation of Methodological Problems in the Cognitive Developmental Diagnosis of Transitivity. (University of Rhode Island, 1978.) DAI 40B: 479; July 1979. [7915472] [ages 4-8]

Thibodeau, Gerard Patrick. The Effect of Question Order, Distractor Position, and Language Set on the Quantitative Verbal Problem Solving Performance of Educable Mentally Handicapped Children. (The University of Connecticut, 1978.) DAI 39A: 6706; May 1979. [7911413]

No significant differences in achievement were found between problems with the question first or last. (EMHs)

Thiessen, Diane Lee. The Effect of Reading Selected Children's Books in Mathematics on the Attitudes and Problem Solving Skills of

Elementary School Children. (Southern Illinois University, 1978.) DAI 39A: 6007-6008; April 1979. [7908090]

No significant positive changes in attitude or achievement were found when pupils read several books on mathematics. (grades 3, 5, 7)

Thompson, Beatrice Rice. The Effects of Father Absence on the Arithmetic Achievement, Self Concept and School Adjustment of Elementary School Children. (University of Georgia, 1978.) DAI 39A: 7254-7255; June 1979. [7914062]

A significant relationship was found between father absence and arithmetic achievement. Blacks scored slightly lower than whites. (grades 3-5)

Thompson, Samuel Birney. An Experiment in Individualized Mastery Learning of College Calculus. (University of Colorado at Boulder, 1978.) DAI 39A: 4795; February 1979. [7903090]

No significant differences in achievement were found between groups using a mastery learning course or the usual course. (college)

Townsend, Gloria Childress. The Effect of Programmable Calculator Use on Probability Estimation Achievement and Attitude Toward Estimation of Students in Second Year Algebra. (Indiana University, 1979.) DAI 40A: 1936; October 1979. [7921312]

No significant differences in estimation achievement or attitude were found between calculator and non-calculator groups using developed lessons. (grade 11)

Treagust, David Franklin. An Investigation of Piaget's Infralogical Groupings Concerning Projective and Euclidean Space. (The University of Iowa, 1978.) DAI 39A: 7269; June 1979. [7912910]

Students' difficulty with spatial ideas was noted, with the suggestion that teaching geometry and science content involving spatial relations is questionable. Males appeared to have more highly developed spatial structures than females. (grades 8, 10, 12)

Tremaine, Claire Dugan. Effects of Gifted Programs on Their Participants: A Comparative Study. (United States International University, 1976.) DAI 39A: 6516-6517; May 1979. [7909637] [adults]

Trevan, William. Effects of Hypnotic Age Regression on Piagetian Cognitive Developmental Tasks. (Rosemead Graduate School of Professional Psychology, 1979.) DAI 40B: 1919; October 1979. [7921468] [college]

Trimmer, Ronald Gene. A Study of Logical Reasoning Using the Game Master Mind. (Saint Louis University, 1978.) DAI 39A: 6008; April 1979. [7908313]

The game was used to assess reasoning and to promote reasoning skills. (grades 3, 5, 7, 9, 11)

Triplett, Suzanne Elaine. Some Effects of Open Classroom

Instructional Styles on Certain Cognitive and Affective Characteristics of Kindergarten-Age Children. (Duke University, 1978.) DAI 40A: 1755-1756; October 1979. [7922789] [grade K]

Trummel, Donald Russell. The Comparative Effect of Four Instructional Methods upon the Achievement of Nine Cognitive Skills in a General Education Physics Course. (Southern Illinois University at Carbondale, 1974.) DAI 40A: 181-182; July 1979. [7916093] [college]

Urton, Pauline Mary. Pupil Characteristics Associated with Variation in Children's Task and Social Behaviors in Open Elementary Classrooms. (The University of Chicago, 1979.) DAI 40A: 3210; December 1979. [--] [ages 6-9]

Vaidya, Sheila Rao. Cognitive Development and Cognitive Style as Factors in Mathematics Achievement. (Temple University, 1979.) DAI 40B: 2345; November 1979. [7924030]

Piagetian measures were correlated with mathematics achievement only in grade 2; field dependence-independence was correlated in all three grades. (grades 2-4)

Vandenberg, Geraldine Jean. The Relationship of Propositional Logic, Formal Operational Thought, and Analytical Thought; and an Investigation of Hierarchical Relationships of the Formal Operational Schemata. (Rutgers University The State University of New Jersey (New Brunswick), 1979.) DAI 40A: 1388; September 1979. [7917919] [ages 13-23]

Vernón, Carlos Henrique. A Study of Some Effects of Sequencing of Delayed Verbalization on Transfer and Retention During the Initial Stages of Mathematical Concept Learning by Discovery. (State University of New York at Buffalo, 1979.) DAI 40A: 727-728; August 1979. [7918757]

Immediate verbalization of a recently discovered concept may have a destructive effect on the acquisition of the concept. (?)

Walton, Harriett Junior. A Study on the Design and Implementation of an Evaluation Model for a College Remedial Mathematics Program. (Georgia State University-College of Education, 1979.) DAI 40A: 143; July 1979. [7914456]

No significant difference in achievement was found between groups using an audio-tutorial method with or without direct instruction. (college)

Ward, Dennis Elliott. The Effect of the Electronic Calculator on Problem-Solving Achievement and Attitudes Toward Mathematics of General Mathematics Students. (University of Southern California, 1978.) DAI 39A: 4038; January 1979. [--]

No significant differences in problem-solving achievement or attitude were found between calculator and non-calculator groups. Reading ability had a greater effect than calculator use. (grade 9)

Warfield, Martha B. Analysis of Selected Factors Related to the

Incidence of High School Dropouts in a Desegregated Metropolitan School Setting. (Michigan State University, 1979.) DAI 40A: 1887-1888; October 1979. [7921212] [grades 10-12]

Warner, Beverly Grace. Teaching Place-Value Understanding with Multi-Base Manipulatives in the Elementary School. (University of Arkansas, 1978.) DAI 40A: 1330-1331; September 1979. [7919252]

No significant difference in understanding of place value was found between groups using a set of manipulative materials for instruction in base ten or other bases. (grade 2)

Washbon, Carolynn Ann. A Study of the Effects of Varying Percentages of Time Devoted to Types of Instructional Activity in Teaching Elementary School Students the Distributive Algorithm for Division. (University of Maryland, 1978.) DAI 39A: 5383; March 1979. [7906688]

No significant difference in achievement was found between groups given varying proportions of time on meaning and practice. (grade 5)

Waters, William Michael. The Use and Efficiency of a Scanning Strategy in Conjunctive Concept Attainment. (University of Pennsylvania, 1979.) DAI 40A: 1331; September 1979. [7919532]

Results did not substantiate the superiority of the focusing strategy as presented and scored. (?)

Webster, Raymond E. Short-Term Memory Capacity in Mathematics Proficient and Disabled Students as a Function of Input Modality-Output Modality Interactions. (The University of Connecticut, 1978.) DAI 39A: 6665-6666; May 1979. [7911419]

Short-term memory capacity differed as a function of the nature of the modality used to present the items and the response required. (grade 6)

Weinstein, Marcia Lois. Dyscalculia: A Psychological and Neurological Approach to Learning Disabilities in Mathematics in Schoolchildren. (University of Pennsylvania, 1978.) DAI 39B: 3565; January 1979. [7824768]

The evidence suggested that dyscalculics are lagging in their development of operational competence and arithmetic facility. Data supported the hypothesis that hemisphericity is implicated in the development of these children. (grades 5, 7)

Wenger, Eugene Blaine. The Effects of Time on the Achievement of Kindergarten Pupils. (The Ohio State University, 1978.) DAI 39A: 4713; February 1979. [7902243] [grades K, 1]

West, Stephen Francis. Problem Solving Processes in High School Geometry. (The University of Texas at Austin, 1979.) DAI 40A: 1331; September 1979. [7920237]

Regular patterns of analysis, synthesis, and heuristic usage were noted. (grade 10)

Wheeler, Larry James. Syntactic Complexity and Its Effect on Written Mathematical Problems. (The University of Oklahoma, 1978.) DAI 39A: 4188; January 1979. [7824619]

It appeared that syntactic complexity affected eighth graders but not tenth graders; the problems were at the eighth-grade computational achievement level. (grades 8, 10)

White, Wanda Marie. On the Application of a Systemic Model to the Analysis of Criterion-Referenced Test Results. (Georgia State University-College of Education, 1979.) DAI 40A: 1331-1332; September 1979. [7920010]

Grade 8 items on the state tests were more difficult than Grade 4 items. Teachers were surveyed for reactions. (grades 4, 8)

Whitlock, Rosalie Cummings. The Effect of Sequencing Modes of Instruction on Understanding and Computation Skills in Basic Addition and Subtraction Facts. (University of Maryland, 1978.) DAI 39A: 5383-5384; March 1979. [7906689]

No significant differences were found between groups given concrete, pictorial, or symbolic sequences. (grade 1)

Whitton, Etta Mae Curry. Documentation of the Evolution of the Concept of Mathematical Induction in the Minds of Students in a Community College Algebra Course. (The Florida State University, 1978.) DAI 39A: 6610; May 1979. [7900810]

From tests and interviews with seven students, several conclusions about learning the mathematical induction principle were drawn. (community college)

Wicker, Tommie Elizabeth. Acquisition of Conservation Through Cognitive Dissonance by Field-Dependent and Field-Independent Students. (University of South Carolina, 1979.) DAI 40A: 1374; September 1979. [7920069] [grades K, 1]

Wiley, Larry Dale. The Construction and Formative Evaluation of the Introductory Portion of a Modern Honors Geometry Curriculum for Secondary Schools. (Columbia University, 1978.) DAI 39A: 6008-6009; April 1979. [7908673]

The developed course was tried out with a small group of students with good results, although some revisions were indicated. (grade 10)

Wilkinson, John H. The Effectiveness of an Individualized, Computer-Assisted Instructional Program (PLAN) with Students from a Low Socio-Economic Community. (St. John's University, 1979.) DAI 40A: 1889; October 1979. [7920969] [junior high]

Williams, David Edward. The Effect of the Use of the Minicalculator and an Associated Curriculum Supplement on Computational Skills and Attitudes Toward Arithmetic of Ninth Grade Non-College Bound Students. (Temple University, 1979.) DAI 39A: 6610-6611; May 1979. [7910028]

No significant differences in computation skills were found between non-calculator and calculator groups with and without special materials. Attitude measures favored the calculator groups. (grade 9)

Williams, Richard Lee. A Comparative Study of Metric Skills of Intermediate Students in Calgary, Alberta, and Spokane, Washington. (Washington State University, 1978.) DAI 39A: 4851-4852; February 1979. [7903602]

Calgary students scored significantly higher than Spokane students. (grades 5, 6)

Willis, Susan Gay. An Investigation of Cerebral Hemispheric Processing as a Function of Cognitive Task, Sex and Spatial Ability. (Purdue University, 1978.) DAI 39B: 4629; March 1979. [7905796] [secondary]

Wilson, Leonard James. Relationship of Diagnostic-Cooperative Teaching Approach to Mathematics Achievement and Personal-Social Adjustment of Inner City Intermediate Students. (Wayne State University, 1978.) DAI 39A: 5925; April 1979. [7908977]

Students having the diagnostic approach scored significantly higher than those having the traditional approach. (grades 3-5)

Wojtulewicz, Gregory Gerard. The Effect of Two Methods of Learning Linear Measurement on the Visual Imagery of Third Grade Students. (Northern Arizona University, 1978.) DAI 39A: 4039; January 1979. [7824570]

Little relationship was found between manipulative materials and visual imagery, nor was the ruler method any more or less effective in relation to visual imagery. (grade 3)

Wolff, Leonard C. Prediction of Achievement in Basic Educational Statistics. (University of Missouri-Columbia, 1978.) DAI 39A: 6087; April 1979. [7906943] [college]

Wong, May Ling. The Effects of Handling Manipulative Devices on the Learning of Selected Concepts in Geometry--A Study with Thirteen Year Old Pupils in Malaysia. (University of Minnesota, 1978.) DAI 39A: 5384-5385; March 1979. [7906391] [age 13]

Woodward, John William. A Study of Relationships Between Professional Characteristics and Teaching Behaviors Which Promote Critical Thinking, Problem Solving, Transfer, and Autonomy. (Indiana University, 1978.) DAI 39A: 5302; March 1979. [7906041]

Teachers' attitudes toward and beliefs about covering algebraic topics had some influence on their teaching behaviors. (teachers in grade 9)

Wright, Geraldine Pressley. A Comparative Study Involving Four Inservice Education Teaching Modes of Presenting the Metric System to Elementary Teachers. (Georgia State University-College of Education, 1979.) DAI 40A: 3102; December 1979. [7927575]

The video-lecture group appeared to gain and retain better than other groups. (elementary in-service)

Yerger, William Mark. The Effect of Seventh and Eighth Grade Developmental Reading Instruction on Academic Achievement. (Lehigh University, 1979.) DAI 40A: 1379; September 1979. [7919991] [grades 7, 8]

Young, Sandra Gales. A Study of the Relationship Between Attitude Toward School and Academic Achievement of Black Emotionally Disturbed Adolescents. (The George Washington University, 1979.) DAI 39A: 7287; June 1979. [7914004] [secondary]

Yudkin, Jacqueline Joy. Distinct Curricular Features of a Magnet-Type School--A Case Study. (University of Southern California, 1979.) DAI 40A: 1854; October 1979. [--] [elementary]

Zartlet, Ann Shapiro. Lateralization: Developmental Aspects and Certain Cognitive Correlates. (University of Rhode Island, 1978.) DAI 39B: 3566; January 1979. [7820596] [ages 4-9]

Zimmerman, Charles William. Contextual Details and Mathematical Problem Difficulty. (The Ohio State University, 1979.) DAI 40A: 143-144; July 1979. [7916046]

Contextual details were found to be an important factor both when the mathematics was varied and not varied. (grade 6)

Zosa, Evangelina Delgado. The Construction of a Test to Measure Creative Ability in Mathematics. (Columbia University Teachers College, 1978.) DAI 39A: 6009; April 1979. [7909036]

The test was found to have reliabilities of .61 and .70; correlation with general creativity was low. (grade 7)

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The AERA Special Interest Group for Research in Mathematics Education (SIG/RME) will sponsor several sessions at the 1981 Annual Meeting of the American Educational Research Association to be held in Los Angeles on 13–17 April 1981. Proposals for papers and/or symposia should be forwarded to Thomas Post, 240 Peik Hall, University of Minnesota, Minneapolis, MN 55455, by 15 August 1980. Proposals must follow the guidelines published in the May 1980 issue of the *Educational Researcher*.

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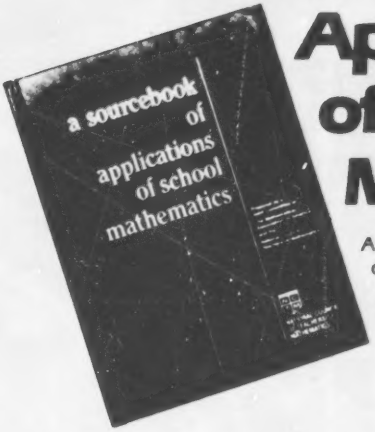

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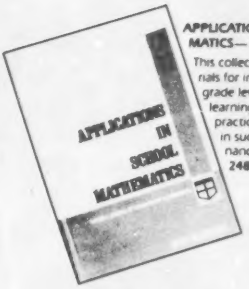

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Rand et al.	S
Ronshausen	E
Sheehan and Davis	E/S
Thompson and McCoy	C

D

Agris	E
Aiello	S
Aman	E
Bangura	C
Batsche	E/S
Brustein	E
Burke	S
Cain	C
Caparella	E
Engelmeyer	S
Gold	E/S
Grossi	E
Harbor-Ibeaja	E/S
Harris, C.	C
Heitgerd	E
Johnson, J. A.	S
Jones, R.	S
Kolpas	S
Leeds	C
Longenecker	E
Miller, J.	E/S
Morris	E
O'Neil	S
Pachter	S
Pezzino	E
Quilter	E
Robinson, A.	E
Robinson, J.	C
Sadowski	E
Simmers	E
Taylor	C
Thibodeau	?
Webster	E
Weinstein	E/S
Wheeler	S

Geometry

J

Af Ekenstam and Nilsson	S
Ayers et al.	E
Bishop	C
Bright	E
Geeslin and Shar	E
Hoz	S
Kerslake	E
Scott and Webb	S
Smith and Litman	E/S
Smith and Schroeder	E

D

Anderson	E
Bassman	?
Beaulieu	S
Bernard, J.	E
Durapau	S
Elrod	S
Friedman	E
Glascock	?
Grossi	E
Gulliver	E
Jewell	S
Johnston	C
Jones, D.	E/S
Just	C
Kane, M.	E/S
Miller, J.	E/S
Moyer	E
Mullen	E
Myers, C.	C
Patrick	S
Quayhagen	C
Ross	C
Sahagian	S
Strasler	S
West	S
Wiley	S
Willis	S
Wong	S

Learning Theory Variables

J

Ceci and Peters	E
Cohen et al.	S
Dangel and Hopkins	E
Davis et al.	E
Fischbein et al.	E/S
Gettinger and White	E
Hoz	S
Johnson and Johnson	E
Kurtz and Karplus	S
Mayer	C
Meyer et al.	E/C
Muller	E
Peck and Jencks	S
Roach	E
Smith, H.	C
Sparks	E
Thompson and McCoy	E/S/C
Uguroglu and Walbert	E/S
Webster	E

D

Aiello	S
Alexander, M.	S
Alexander, T.	C
Amstutz	E
Assad	S/C
Bartling	E
Bassman	?
Beck, E.	?
Bernard, J.	E
Beutler	E
Brustein	E
Cashing	C
Chase	C
Cunningham	C
Economopoulos	S
Edwards	E
Eisert	C
Elrod	S
Gerfin	S
Hawkins	S
Hiedrich	C
Holz	S
Ibrahim	S
Johnston	C
Karp	E?
Karr	E
Kingston	E
Kirk	E/S
Lee	S
McDaniel, C.	?
McDaniel, E.	S
McKay	E/S
Michael	S
Moers	C
Morgali	S
Nordin	E
Pelosi	S
Pezzino	E
Quilter	E
Richmond	S
Roberts	S
Salend	E
Seghini	S
Shoaee	C
Simmers	E
Simon	E
Strasler	S
Tebeleff	E
Thompson, S.	C
Vandenberg	S/C
Vernon	?
Waters	?
Webster	E
Willis	S
Zosa	S

Materials

J

Alderman et al.	E
Austin and Howson	E/S/C
Bright et al.	E
Bright et al.	E
Campbell	E
Eastman and Barnett	E
Good	E
Rankowski and Glaey	C
Smith, H.	C
Sparks	E
Watkins	C
Young and Becker	S

D

Blumberg	C
Channell	E
Childs	E
Gallagher	C
Gavette	E
Gingold	E
Greenwald	E
Guillory	E
Gulliver	E
Harris, C.	C
Ibarra	E
Indelicato	S
Karp	E?
Kirkpatrick	C
Kongkitpisal	C
LaNeve	S
Lemasters	C
Lester	E
Masse	E
McDaniel, C.	?
McDougal	E
Muraski	E
Paolini	E
Paul	C
Romero	E
Sadowski	E
Shebl	S
Smith, J. E.	S
Smith, L.	E
Thiessen	E/S
Trimmer	E/S
Warner	E
Wheeler	S
Whitlock	E
Wojtulewicz	E

Wong	S
Wright	E
Yerger	S

Measurement

J

Bright	E
Shrigley and Trueblood	E

D

Agrawal	E
Attivo	E
Bradbard	E
Chen	C
Clark	E
Gibbs	C
Green	E
Hess	E
Malone	S
McNeary	C
Moyer	E
Smith, S.	E
Williams, R.	E
Wojtulewicz	E
Wright	E

Number and Numeration

J

Estes	E
Fischbein et al.	E/S
Gast et al.	E
Good	E
Hendrickson	E
Russac	E
Saxe	E

D

Atweh	E
Baroody	E
Hirstein	E
Petitto	C
Sachs	E
Sorenson	C
Warner	E

Operations with Whole Numbers, Fractions, and Decimals

J

Beattie	E
Bergan et al.	E
Bright et al.	E
Ceci and Peters	E
Clement	E
Cohen et al.	S
DiVincenzo	E
Friend	E
Good	E
Hamrick	E
Hendrickson	E
Lepore	E
Peterson and Janicki	E
Robinson, M.	E
Sherrill	E
Thornton	E

D

Aiello	S
Baroody	E
Channell	E
Engelmeyer	S
Gold	E/S
Gulliver	E
Harbor-Ibeaja	E/S
Hector	C
Hildebrand	E
Hirstein	E
Holz	S
Ibarra	E
Ibrahim	S
Karp	E?
Kingston	E
Lester	E
Masse	E
McDougal	E
Morris	E
Petitto	C
Robertson	E
Shell	C
Smith, C.	?
Smith, J. E.	S
Southall	E
Washbon	E
Whitlock	E

Organizing and Grouping

J

Adams and McLeod	C
Deatsman	C
DiVincenzo	E
Evans	E
Feuerstein et al.	S
Grant et al.	E
Hassett and McCoy	C
Johnson and Johnson	E
Kurtz and Karplus	S
Mayer	C
McLeod and Adams	C
Peterson and Janicki	E
Radatz	E
Rankowski and Glaey	C
Robinson, M.	E
Ronshausen	E
Sheehan	E
Thompson and McCoy	C
Threadgill	S
Threadgill	S
Whitley	E/S
Young and Becker	S

D

Alexander, T.	C
Alexander, W.	E
Aman	E
Athappilly	E/S
Barnett	E
Beal	C
Blumberg	C
Brown	E
Burke	S
Cashing	C
Chanick	E
Chiaramonte	C
Christiana	E
Cicchelli	E
Clark	E
Clinefelter	E
Cole, M.	E
Collins	S
Crowston	C
Cunningham	C
Darer	E
DeComo	E/S
Dittmer	S
Donlan	E
Drayton	S
Durapau	S
Ebmeier	E
Egolf	S
Fesharaki	S
Friedman	E
Gallegos	E
Gilmer	C
Gold	E/S
Hartshorn	E
Heitgerd	E
Hess	E
Horak	E
Jackson, H.	C
Johnson, H.	E
Johnson, N.	E
Jones, R.	S
Knoblauch	C
Ladner	E
Loughran	E
Miller, C.	C
Monell	E/S
Morton	S
Mueller	E
Newman	E
Nguyen	S
Rivera	E

Robinson, A.	E
Russell	S
Russo	E
Sachs	E
Sanchez	E
Shebl	S
Siegel	E/S
Silverstein	E
Simmers	E
Snyder	E
Triplett	E
Urton	E
Vernon	?
Wenger	E
Wilkinson	S
Wilson	E
Yudkin	E

Other Individual Factors

J

Adams and McLeod	C
Adelman et al.	E/S
Ayers et al.	E
Blustein and Lester	C
Boucher and Deno	E
Ceci and Peters	E
Fennema	E/S/C
Feuerstein et al.	S
Fischbein	E
Forness et al.	E
Gajar	E
Grant et al.	E
Leinhardt et al.	E
Lepore	E
Luchins and Luchins	C
Malone et al.	E
Marjoribanks	E
McLeod and Adams	C
Morrow	E
Panunto and White	E
Peng and Jaffe	C
Piersel and Kratochwill	E/S
Pittman	E/S
Preece	E/S/C
Protinsky and Hughston	S
Radatz	E
Rand et al.	S
Roach	E
Satterly	E
Schell and Courtney	E
Sewell	E
Sheehan	E
Sherman	S
Smith and Litman	E/S
Smith and Schroeder	E
Stamp	S
Swanson	E/S
Swanson et al.	E/S
Thornton	E
Threadgill	S
Webster	E
Wilson et al.	E
Zinkus and Gottlieb	S

D

Aman	E
Amstutz	E
Bander	C
Batsche	E/S
Beal	C
Beck, E.	?
Benton	C
Berger	E/S
Bickford	C
Brustein	E
Chang	S
Christiana	E
Cicchelli	E
Clark	E
Cole, M.	E
Davis, C.	C
Dowling	C
Edwards	E
Eisert	C
Evans	S
Ford	C
Frank	E
Friedman	E
Gaskill	E
Glascock	?
Gold	E/S
Grahs	C
Guillory	E
Hardeman	S
Haran	S
Harris, D.	E
Hawkins	S
Heller	S
Hendrickson	?
Jackson, M.	C
Johnston	C
Jones, D.	E/S
Kahl	S
Kane, J.	E/S
Kane, M.	E/S
Keehner	S
King	E
LaFornara	E
Legette	S
Lester	E
Longenecker	E
Lunder	S
McDaniel, E.	S
McKay	E/S
Mitchum	E
Morton	S
Nardi	C
Nelson, G.	S
Nelson, R.	E/S
Odell	E/S/C
Parrish	E
Patrick	S
Perl	S
Preston	E
Ramage	E
Salend	E
Sanchez	E
Schwartz	E
Scott, N.	E/S
Segovia	E
[illegible]chrock	C
[illegible]ilverstein	E
[illegible]mon	E
Smith, J. A.	E
Stout	E/S
Tebeleff	E
Thompson, B.	E
Treagust	S
Vaidya	E
Ward	S
Warfield	S
Webster	E
Weinstein	E/S
Wic[illegible]er	E
Wilkinson	S
Willis	S
Young	S
Zartlet	E

Problem Solving

J

Caldwell and Goldin	E
Cohen	S
Days et al.	S
Johnson and Harding	C
Kulm and Days	C
Luchins and Luchins	C
Melin	S
Petitto	S
Schoenfeld	C
Silver	S
Webb	S

D

Alvarez	C
Barron	E
Bernard, J.	E
Blake	C
Canner	E
Clarkson	S
Economopoulos	S
Egolf	S
Gallagher	C
Giffune	S
Hicks	S

Hunt	C
Ibarra	E
Johnson, N.	E
Knippenberg	E
Masse	E
McDaniel, C.	?
Metwali	S
Michael	S
Muraski	E
Putt	E
Rutledge	E
Southall	E
Spratt	E
Thibodeau	?
Ward	S
Waters	?
West	S
Wheeler	S
Wiley	S
Zimmerman	E

Sequencing and Structure

J

Arehart	S
Dangel and Hopkins	E
Estes	E
Gast et al.	E
Gettinger and White	E
Hamrick	E
Hughes	E
Perry et al.	E

D

Alvarez	C
Arehart	S
Bartlett	E
Burrows	C
Crockett	S
Dobelstein	S
Donnellon	S
Gallegos	E
Hardeman	S
Ibarra	E
Jewell	S
Klein	E
Kostaki	S
Makoshi	S
Miller, C.	C
Moehrlin	C
Morris	E
Myers, S.	S
Roberts	S
Rodrigue	S
Scott, J.	C
Southall	E
Starkey	E
Washbon	E
Wiley	S

ABSTRACTS OF FUTURE ARTICLES

Calculator Use and Problem-Solving Performance, *Charlotte L. Wheatley*

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Sex Differences in First-Year Algebra, *Jane O. Swafford*

The study investigated sex-related differences among first-year algebra students with respect to achievement, attitude, and consumer problem-solving skills. The subjects were 329 females and 294 males enrolled in first-year algebra courses in 17 schools across the country. In the fall, no sex-related differences were evident in arithmetic computational skill or attitude about the usefulness and enjoyment of mathematics. Males showed a slight advantage on consumer items. In the spring, no sex-related differences in algebra achievement were found; a decline in attitude was observed for both groups; and the differences on consumer exercises became more pronounced.

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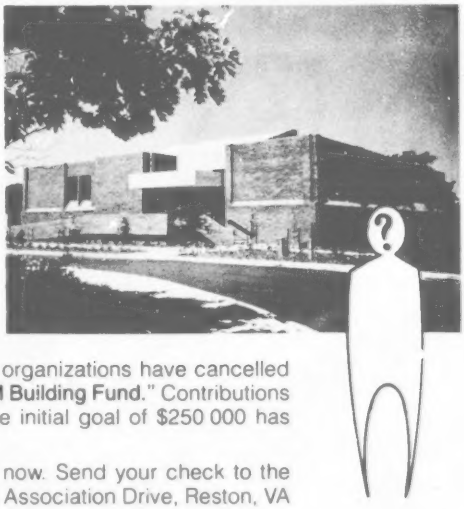

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